Croonian Lectures
ON
POINTS CONNECTED WITH DIABETES.

Delivered at the Royal College of Physicians,

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LECTURE III.—PART III.

IT is a minimum amount of sugar in the blood which is the character of health, and a larger amount which is associated with unnatural states. To maintain the minimum amount the liver exercises a sugar-detaining and sugar-assimilating function, and this prevents us from being diabetic. It has been asserted by Bernard, and my own observations confirm the assertion, that the blood of the herbivora contains no more sugar than that of the carnivora. Indeed, according to the results I have furnished in a former part of these lectures, the blood of the dog contains a higher proportion of sugar than that of the sheep or bullock. Now in the herbivora, besides the sugar derivable from an internal source, we have that to deal with proceeding from ingestion; and if the liver did not stop, as I contend it does, the passage of sugar into the general circulation, there ought to exist a marked difference adversely to what is noticed. The sugar which actually escapes from the liver is so small in amount that I cannot conceive it to have anything to do with the large operation of appropriation of this principle to force, production that must occur as a part of the general phenomena of life.

Expressed in precise language, I would say that the liver is essentially a sugar-assimilating instead of a sugar-forming organ; and that when its assimilative action is properly exerted, so little sugar is allowed to pass into the general circulation that the quantity existing in arterial blood is insufficient for rendering the urine more appreciably saccharine than is observed in the healthy state; but that when its assimilative action is not properly exerted, sugar is allowed to pass, and in proportion as it does so the urine acquires a more or less marked saccharine character.

The question before us is one which resolves itself into the utilisation or non-utilisation of a certain kind—viz., the carbo-hydrate kind—of material. We know that in diabetes this material reaches the blood as sugar, and thence escapes unutilised with the urine. If in health it passed in a similar manner into the blood, to obviate its escape it must undergo appropriation in the circulatory system, and the difference between health and diabetes would then resolve itself into a difference in the capacity of appropriation within the circulatory system. This view, however, is not adopted by the advocates of the glycogenic doctrine, and the evidence afforded by observation is against it. We are therefore driven to the conclusion that the material in question must have a different destination under normal circumstances, and I contend that in reality the liver ought to detain and assimilate it instead of allowing it to pass as sugar into the circulatory system, and that it is by this action we escape being diabetic. Put in another way, it may be said that the sugar escaping in diabetes is the representation of the carbo-hydrate material which ought to be utilised in the system, but which, finding its way into the general circulation as sugar, is thence eliminated as it is. To escape being thus eliminated, it is obvious that the carbo-hydrate material in question must pursue some other path towards utilisation than passage into the general circulation as sugar, and this is tantamount to saying that under normal conditions there must exist a capacity of appropriating carbo-hydrate material in this other direction equal to the disposal of that which is represented by the sugar escaping in a full-marked case of diabetes, and this embraces, if not all, certainly in the main, all the carbo-hydrate material which the system has to deal with. Not only, therefore, must there be this other power of disposal, but such power must be exercised, instead of the material being allowed to pass into the general system as sugar, as is represented under the glycogenic doctrine, to avert the manifestation of diabetes.

I have previously discussed what Bernard has said about the appropriation or destruction of sugar in the circulatory system, and have shown that my own analytical observations give no evidence of any significant amount of destruction occurring. It may be assumed—as, indeed, the aggregate of my results indicated—that a minute disappearance takes place. With an organic principle like sugar, susceptible of undergoing change such as occurs in the lactic acid fermentation, it is scarcely to be expected that it would remain uninfluenced by the molecular actions going on around it; but that nothing of a nature to be compatible with the large disposal of it as an alimentary principle that must ensue is to be recognised is, I consider, proved by the evidence that has been already adduced. If the destruction of sugar occurred within the circulatory system of the herbivorous animal to an extent sufficient to account for the disposal of that which is derived from ingestion as well as from alleged formation, what, it may be asked, ought to be the condition in the carnivorous animal which does not receive the supply of sugar from without? Surely, if the destruction is carried out with sufficient fullness to keep down the sugar in the system of the herbivorous animal, it ought to be equal to the entire removal of the sugar contained in the arterial blood during its passage to the veins in the case of the carnivorous animal. In reality, the sugar that has to be dealt with in the blood shows itself to be as much beyond the capacity of destruction in the peripheral vessels in the carnivorous as it is in the herbivorous animal. No material difference, in fact, is to be traced in the state of things in the two groups of animals. In both cases alike the sugar contained in arterial blood reaches the veins without undergoing any material diminution, and thence must needs circulate through the system over and over again. Whatever destruction occurs can only fulfil a subsidiary office. Admitting that the operation is to some extent carried on, it is altogether wanting in the magnitude required to be associated with the appropriation of sugar as a force-producing agent in the body.

My own version of what occurs is this. We know that in a large number of animals the food is of such a nature as to supply sugar in notable quantity for absorption from the alimentary canal. A portion of this may reach the thoracic duct through the absorbents, and thence be conveyed to the general circulation, accounting in part for what sugar is there encountered. The main channel, however, for the passage of sugar from the alimentary canal appears to be the bloodvessels, and transmission into them is permitted by the property of diffusibility which this agent possesses. Absorbed into the portal system, it is conveyed to the liver, where it becomes, if not entirely, certainly almost entirely, checked in its onward progress, and prevented from entering the general circulation. I have shown, by observations which have been for a long time made known, and which I need therefore here only allude to, that sugar leads to an increased accumulation of amyloid substance in the liver. The evidence adducible points to the occurrence of a direct formation of amyloid substance from absorbed sugar. As the sugar is passing through the capillaries of the organ it becomes picked out by its cells and converted into the principle I have mentioned. Nothing could be more favourable than the conditions that exist for the occurrence of this operation. Surrounded as the capillary vessels of the lobule are with rows of secreting cells, the blood is brought into the closest proximity with the secreting element, and thus most advantageously placed for selective action to be exerted.

Micro-chemical observation shows that the amyloid substance of the liver is confined to the cells, and doubtless immediately the sugar is abstracted from the blood it is transformed by the action of the cell into the principle named, for otherwise the organ would give evidence of the presence of sugar in a manner that it is not found to do. Moreover, sugar is a diffusible substance, and would not therefore be retained. Amyloid substance, on the other hand, belongs to the class of colloids, and with its non-diffusibility possesses the properties which physically contribute to its retention in the cells, where it presumably undergoes a change which forms one of the links in the series leading up to the final issue—the utilisation of sugar as a force-producing agent in the system.

As regards, then, the sugar derived either directly or indirectly from the food and absorbed from the alimentary canal, my proposition is that under normal circumstances it is stopped by the selective or secreting action of the cells of the liver, and in these transformed into amyloid

substance. When not thus stopped it reaches the general circulation, and as a result gives rise to a saccharine impregnation of the urine, standing in proportion to the amount of sugar absorbed from the alimentary canal. This is just the condition that exists in diabetes, and it is well known that in this disease the eliminated sugar stands in relation to the amount of sugar or sugar-forming material ingested.

But it is not only from the sugar derived from the food that the amyloid substance of which I have spoken takes origin. I do not know of any evidence to show that it is formed from fat. Nitrogenous matter, however, undoubtedly is a source for it. This is proved by its existence in well-marked quantity in the liver of the animal-feeder kept upon lean meat. In diabetes also, where a severe form of the complaint exists, sugar is voided upon a strictly animal diet, and such sugar may be put down as taking origin from the abnormal descent of the amyloid substance derived from nitrogenous matter. It is known that ingested nitrogenous matter leads to the production and elimination of urea, and it is believed that the production occurs in the liver. A splitting up of the nitrogenous compound ensues, and its nitrogen, appropriating a certain amount of its carbon, hydrogen, and oxygen to form urea, leaves a complementary portion of carbon, hydrogen, and oxygen, from which it may be assumed amyloid substance is generated. If we take the percentage composition of albumen and give to the nitrogen the amounts of the other elements required to form urea, we see the amounts of carbon, hydrogen, and oxygen that may be applied to the purpose named. This table affords a view of how the matter stands :—

Urea and Complementary Residue derivable from Albuminous Matter.

	Albumen.		Urea.		Residue.
Carbon.....	53·50	...	6·64	...	46·86
Hydrogen ...	7·00	...	2·21	...	4·79
Nitrogen	15·50	...	15·50	...	—
Oxygen	22·00	...	8·85	...	13·15
Sulphur	1·60	...	—	...	1·60
Phosphorus...	0·40	...	—	—	0·40
	100·00		33·20		66·80

From this tabular representation it is seen that in the presumed splitting up of the albuminous molecule one-third passes into urea and two-thirds into complementary residue—that is, the relation between the urea and complementary residue is as 1 to 2. Now, some observations by Dr. Sydney Ringer on the relation between eliminated urea and sugar in diabetes that were published in the Medico-Chirurgical Transactions for 1860 present a conformity which is certainly striking, if nothing more. The observations show that during fasting and under a diet of animal food—when, in other words, there is no sugar from ingestion to influence the state of the urine—the eliminated urea and sugar stand in the ratio of 1 to 2·2. As might be expected, the figures representative of the eliminated products are much higher under the animal diet than during fasting, but, notwithstanding this difference, the same ratio was maintained. It is right to state that this correspondence I have brought into view must not be taken for more than it is worth, inasmuch as the complementary residue referred to does not express the composition of sugar or of one of the allied carbohydrates, the carbon being out of proportion to the hydrogen and oxygen, and particularly so to the latter.

Whatever may be the precise manner, however, in which the elements of nitrogenous matter become rearranged, it may be said that there are grounds, on the one hand, which have led observers to entertain the view that it is in the liver the production of urea occurs, and practically, on the other hand, it can, as I have mentioned, be shown that from nitrogenous matter amyloid substance is here formed. It is the latter point which essentially concerns us with reference to diabetes. The liver not only arrests the passage of sugar absorbed from the alimentary canal, and effects its transformation into amyloid substance, but also forms this substance from nitrogenous matter. This may be regarded as constituting the first step of an assimilative action exerted by the organ; and, if we are not able at present to follow the process on, and state what next occurs, we can, I consider, say upon the evidence I have advanced that the amyloid substance is not physiologically destined to undergo conversion into sugar, and pass as such into the general circulation. The glycogenic doctrine, it is true, implies the occurrence of such an event. Transformation into sugar is contended for, and Bernard speaks of this formation of sugar as the beginning of a series of phenomena of combustion ultimately resulting in carbonic acid and water.

CASE OF UNUNITED FRACTURE OF THE PATELLA; OPERATION ANTISEPTICALLY PERFORMED.

BY HENRY SMITH,
PROFESSOR OF SURGERY IN KING'S COLLEGE, SURGEON TO KING'S COLLEGE HOSPITAL.

WILLIAM P——, aged twenty-two, single, was admitted into the Fisk ward on May 10th, 1878, with a transverse fracture of the patella (right). A sailor by occupation; temperate. Twelve months ago, when jumping from a ship on to the pier, he slipped, and on attempting to save himself from falling felt something give way in the right knee. This was followed by inability to walk and pain on movement of the joint. He was admitted into a colonial hospital, where a figure-of-8 bandage was applied to the knee, and the limb kept elevated. At the end of twelve weeks he was discharged, union between the fragments having taken place, though the tip of the finger could be placed between the edges of the bones. Was only able to walk about with the assistance of a stick. Three weeks after discharge he slipped and twisted his knee, and felt the union between the fragments give way. Was readmitted to the hospital, where the same treatment was adopted, but at the end of thirteen weeks was discharged without any attempt at union between the bones having taken place. Has since worn a leather knee-cap, and could just manage to get about with the aid of two sticks, but says that the knee "was always letting him down." Came to England, and was in the London Hospital with some ulceration of the skin about the joint, which was cured in three weeks. On May 10th, 1878, was admitted into King's College Hospital.

On admission his general health was good. There was found to be a transverse fracture of the right patella, the fragments being separated to the extent of two inches, the upper fragment being considerably the larger. Movements of the joint were limited, with inability to extend the leg. On bending the joint the condyles of the femur were distinguishable beneath the skin. Muscles of the leg and thigh wasted.

Operation (May 18th).—The patient having been put under the influence of ether, and full antiseptic precautions having been taken, a longitudinal incision five inches in extent was made, opening freely the cavity of the joint and exposing the fractured bone and the condyles of the femur. There being some hæmorrhage, Esmarch's bandage was applied. The fragments of the patella were found bound down to the condyles by strong fibrous adhesions, and also united by fibrous tissue. This required dissecting off freely. A thin section of the opposing surfaces of the bone was then cut, and an attempt made to draw the fragments together, which failed. In consequence of the constricting influence of the Esmarch bandage acting as an obstacle to the drawing down of the upper fragment, it was removed, but without producing the desired effect. Free incisions were then made on either side of the fractured portions of bone with the hope of loosening them sufficiently, but scarcely any effect was produced. The quadriceps extensor was then divided subcutaneously about three inches above the joint, and the fragments were found to be readily drawn together. The bones having been drilled in two places on the outer and inner side, two silver wires were passed through and twisted, the bones being thus held in perfect apposition. Two horsehair drains were then passed into the joint through openings made on the outer, inner, and back part of the joint, thus ensuring perfect drainage. The primary incision was then accurately adjusted by means of numerous silk stitches, and the wound dressed and placed on a straight excision splint. Night temperature 100°; pulse 98. No pain. Ordered twenty minims of solution of opium. Limb to be kept elevated.

May 19th.—Temperature: morning, 100°; evening, 100·°. Pulse 100 and 84. Dressed. No pain, heat, or swelling. Discharge sanious and free from smell.

20th.—Temperature: morning, 99·8°; evening, 99·4°. Pulse 104 and 90. Dressed. Discharge serous; no smell. No pain or constitutional disturbance. Tongue clean. Feeds well. Primary union of line of incision has taken place.

22nd.—Temperature normal (four days since operation), and has continued about the normal line ever since, except on two occasions when there was slight diarrhœa, the temperature then rising to 100° for a few hours. The stitches were removed one week after the operation, and the drains removed gradually at each dressing till June 12th, when all drainage was removed. Dressed at intervals of seven days.

June 28th.—Wounds all healed. No discharge. Line of fracture with difficulty made out. Joint free from any inflammation. An attempt was made to remove the silver wires, but they broke off close to the bone. One has since been removed. Passive movement of the joint commenced. Splint left off. Allowed to get up.

July 2nd.—Antiseptic dressing left off. Can move the joint slightly. Patella movable over condyles of femur.

15th (eight weeks since operation).—General health good. Can walk alone, bending the joint, and with only a slight limp. Fragments in close apposition, there being no apparent interval between them or movement. Muscles of limb developing. Leg can be flexed on thigh to an angle of 45 degrees.

25th.—Patient discharged. Use of limb recovering rapidly.

Remarks.—Emboldened by the success which attended the operation of my colleague, Professor Lister, I determined to adopt the same course of treatment when a suitable case presented itself. Curiously enough, such a case fell under my care about the date of Mr. Lister's operation. It was that of a female who was brought into King's College Hospital with a fractured patella on one side. On examining the other limb it was ascertained that a fracture of the corresponding patella had occurred two or three years previously. This had been inefficiently treated, and the result was that the fragments were separated for two inches, and the limb was so faulty that she continually fell, and in her last fall the other patella snapped. My house-surgeon, Mr. Howlett, made an excellent job of this, and I then, having recently seen Mr. Lister's operation, felt it my duty to place before her the question of a similar proceeding. She would not accede to this at that time, and our experience of the method being so limited I did not think it right to press it.

In the instance just related I adopted the same course, telling the patient that in all probability we might secure him a strong and useful limb, at the same time not concealing from him the risk which would attend the operation. He quickly made up his mind, and, considering that he had his life before him, and that his limb would remain an encumbrance to him, I did not hesitate to afford him the benefits which my colleague had shown our art could bring to him. It is true the case was an unfavourable one to meddle with; the fragments were so widely separated that they could not be brought into contact. So much was this the case that one of my esteemed colleagues pointed this fact out to me as an argument against the operation. Moreover, the lower fragment was a very small base to work on.

However, I carefully considered these matters, and determined that these were not sufficient objections. Moreover, I was emboldened not only by the success of Professor Lister's case, but by the result of a case of ununited fracture of the humerus in a wretched ill-fed man of sixty, in which I had made a section of the fragments and united them by silver wires with complete success, and which gave me no room for hesitation in the matter. I determined both in justice to the patient and to Professor Lister to employ the antiseptic plan, and to follow most rigidly his own steps in the operation, so far as the case permitted of it; but, of course, as it has been seen, the two cases were so different that I was compelled to alter my course in various ways, but still in the main I adhered to the lessons which my colleague had taught me.

The operation was rendered extremely difficult and tedious by the great divergence of the fragments, and by my endeavouring to bring the parts together without dividing the quadriceps muscle. Thus I attempted to save this muscle, and in order to free the patella I divided the tissues attached to the sides of the fragments very extensively, and of necessity cut through several arterial branches. I found, however, after a tedious dissection, that I could not attain the object desired, and I then reluctantly introduced a long narrow-bladed knife about four inches above the retracted patella, and freely divided all muscular fibres subcutaneously quite down to the bone. The effect was at once seen. The fragments of bone were now easily brought together, and their surfaces being found to be well-fitting they were brought together by two silver wire sutures.

I look upon my attempt to bring the edges of the bones together by so freely dividing the tissues laterally as an error; it was, however, like many surgical mistakes, committed in good faith. Much less mischief might occur, I believe, from dividing the substance of the muscle at once rather than freeing its attachments on either side of the bone, and should such another case present itself I should at once divide the muscle. The section of the surfaces of the bone is an important matter to attend to. I made a very free section, exposing good broad surfaces, so as to enable them to lie well together, and I found that they could be retained more readily together by the intervention of two silver sutures rather than of one.

As regards the share the antiseptic method had in the great success of this case, I must leave it to others to decide; but it appears to me that we are greatly indebted to this plan of treatment, which was admirably carried out all through by Mr. Milles, my house-surgeon, for the absence of any local or general disturbance. It is true, as I have more than once stated to my pupils, I have seen cases of excision of the knee where rapid union of most of the wound has taken place without any local or general disturbance under the old system. Nevertheless, the results which were witnessed in this case as well as Mr. Lister's are such as to lead me to the conviction that the antiseptic method should be employed in undertaking such a serious operation as has just been described; in fact, as I stated before, in regard for the safety of the patient, and in deference to Mr. Lister, I determined at once not to undertake it without carrying out in its entirety the antiseptic method. It will be a great boon to surgery if it be found that by the employment of this method such an operation as is here described is robbed of all the dangers attending it. So far as this individual operation itself goes, we cannot of course—so limited is our experience—say at present that it is robbed of all its dangers. I would be very glad to say so, for since the performance of this operation, I have been consulted by a young married lady who had the misfortune to break her patella, and she has been left much in the same position as was the young man. I told her of the operation, and said I would undertake it; but, in answer to her own and her husband's inquiries, I was compelled to say that there was some risk both to limb and life which she must submit to, and under those circumstances she has elected, for the present at least, to resort to an artificial support which has been constructed for her, and which prevents her falling.

Wimpole-street.

ON DIPHTHERIA, FROM A PREVENTIVE-MEDICINE POINT OF VIEW.[1]

BY W. N. THURSFIELD, M.D., S.SC.C. CAMB.

I USE the word "preventive" in its old English sense, and by Preventive Medicine I mean "*Ars Præveniendi*," the art of going before and warding off or mitigating the severity of a disease; and I have decided to restrict my remarks to a consideration of diphtheria from a preventive-medicine point of view, because it is only from that point of view that I can lay claim to any exceptional experience, and because I can thus confine myself almost exclusively to the results of personal experience.

As a medical officer of health in several of those counties which are peculiarly liable to diphtheria, it has been my lot to be called upon to investigate a very large number of separate and distinct outbreaks; and during the last six years I have seldom been without an outbreak of this disease under observation: some limited and isolated in the

[1] Paper read before the Birmingham and Midland Association of Medical Officers of Health, July 4th, 1878.

house in which the disease has first appeared; in other cases epidemics of considerable extent. These outbreaks have not been confined to any particular district, with population living under similar physical and vital conditions, but have been spread over some twelve hundred square miles of country, in localities widely differing in their geological and physical aspects, and in the occupations of their inhabitants. That these observations have been made for the most part in purely rural districts is not only to a large extent a necessity of the case, but also their chief advantage. The value of observations as to the etiology of any particular disease does not so much consist in the number of cases observed (all of which may have been disseminated by the same mode) as in the number of separate outbreaks investigated. Now, although diphtheria may be imported, and indeed prevail extensively in a large town, yet the number of entirely disconnected outbreaks will be small, and the mode of dissemination uniform, or at least analogous. All diseases must be investigated in those localities where they are endemic, and where they have the breeding-grounds from which they sally forth from time to time. Diphtheria is in this sense emphatically a disease of the country; and if the country is indebted to the town for periodical invasions of typhus and typhoid, the country returns the compliment, I believe, with diphtheria. Moreover, all questions concerning the cause and dissemination of disease are more advantageously studied, when possible, in rural districts, where more accurate information can be obtained as to the movements, connexions, and relations of the people, and sources of error as to infection eliminated in a way not possible under more crowded conditions of life.

As the term "diphtheria" is frequently somewhat loosely applied, it will be well to state, as precisely as possible, what is the disease I mean by the term. In a paper written by me on this subject a few years back I defined diphtheria as "a systemic contagious disease characterised by a tendency to membranous exudation chiefly affecting the pharynx; and having these peculiarities—that during its course albumen is frequently present in the urine, and recovery is peculiarly liable to be followed by various forms of local paralysis." Now, although all these characteristics are frequently presented by the same case, they are by no means invariably so; and I would now wish to add to that definition "or any sore-throat of an infectious nature," excluding, of course, those in which, as in syphilis and scarlatina, severe throat symptoms are merely local symptoms of an otherwise well-recognised contagious disease. I should be glad, indeed, to make one suggestion, which, if adopted, I feel sure will be attended with very great advantage. Whilst the public generally regard diphtheria as a disease much to be dreaded, and requiring special measures of isolation, they do not take this view of a disease unless it is called diphtheria; but some medical practitioners do not lay so much stress upon the infectious nature of the disease as upon the presence or absence of the membrane (διφθέρα) in the throat, and only call those cases diphtheria where there is a well-developed false membrane. Unless practitioners were more agreed as to what disease should be called diphtheria, it would be well to do away with the term altogether, and replace it by the old English term "contagious cynanche," used for the same disease before the introduction from France of the word "diphtheria."

IS DIPHTHERIA A NEW DISEASE?

I think decidedly not, and that on both historical and theoretical grounds the disease has a right to be considered as old in the history of the world as any. On theoretical grounds—because I believe its natural nidus and forcing ground is to be found in a condition which would be certain to be a prominent sanitary defect in the earliest constructed habitations. On historical grounds—because the symptoms are well marked and defined, and plain references to it are to be found in the oldest Greek and Roman writers on medicine. To go no further back than the middle ages, no one, I think, can read the account given by the learned Hecker of some of the great epidemics of the middle ages without feeling convinced that he is reading a very good and accurate description of a severe epidemic of diphtheria.

The term diphtheria was introduced by the French physician Bretonneau in the year 1818, but the name does not appear in the mortality returns of the Registrar-General before the year 1855, and, indeed, did not come into general use amongst medical men until the year 1858. I do not think, however, there is the least reason to believe, as has been frequently asserted, that the disease was new to this country, or even a modern revival or importation of an old disease. In our own country I have no doubt that before the disease was admitted under the name of diphtheria to the records of the Registrar-General it had prevailed pretty much as in the present day, but was known variously as cynanche maligna, angina membranea, croup, suppressed scarlatina, &c. I have arrived at this conclusion partly on the strength of personal evidence obtained from veteran medical men, who have practised for years before the introduction of the term diphtheria, in localities in which that disease is now endemic, and partly also from the evidence afforded by an examination of the death registers in the same localities from the year 1837 down to the present time, and these from their commencement give unmistakable evidence of the existence of fatal sore-throats, from collateral evidence of an infectious nature. The evidence of the medical men referred to above is also conclusive that, whilst there may not have been in schools &c. the same facilities for the dissemination of the disease as at the present day, they believe outbreaks of contagious cynanche to have been at least as common, and one veteran of fifty years' practice in the same locality pointed me out a house in which he had spent two New Year's Days at wide intervals of years in attendance on cases of cynanche maligna. How far there may not have been some alteration, either in the type of the disease or in its virulence of infection, is another question, and we must not refuse to receive evidence because we cannot understand it. Nothing is more remarkable in the records of diphtheria than the very constant reference to it as a new disease. A member of my own family, who practised as a physician in the midland counties in the last century, has left a family tradition that, when called upon to treat the "new disease," infectious croup, the only remedy he found efficacious was calomel in large doses. Bretonneau, in his time, spoke of the disease as new to France. In the great epidemic in this country in the years 1858 and 1859 there seemed to be a general concensus of opinion that there was at least a new type of disease. I well remember at that time hearing at a medical school in London a clinical lecture on the disease as one new, in its then symptoms, to this country. To what extent this alteration existed, and whether dependent upon the disease or on the individual constitution, space will not allow me to consider, even if provided with the necessary information. It would seem at first sight that, so far at least as concerns the period subsequent to the commencement of the records of the General Register Office, the question as to whether the disease now known as diphtheria had of late years become more fatal in this country, was a case peculiarly fitted for decision by statistics. It was with this end in view that I examined some thousands of entries in a number of registration sub-districts. I found, however, that for two reasons, either of them sufficient, it was quite impossible to obtain information which could fairly be used statistically; first, because it was impracticable to draw any rule as to the death entries which one should regard as diphtheria, in the twenty years prior to the general introduction of that term, and secondly, there was the fact that in the early days of registration the number of deaths amongst children and others (particularly in some localities) registered as "cause not certified," were a fatal source of error, as they amounted to a far larger number than the total number of deaths from throat affections in the same period.

The search, however, was by no means fruitless, and brought out the remarkable fact which I make the central point of this paper. This fact is, that in certain isolated hamlets and houses, where, in recent years, I had been called upon to investigate cases of diphtheria, where it was impossible to trace any sources of infection, and which seemed typical cases of the kind (more frequently met with in connexion with diphtheria than any other disease), that one could only explain on the *de novo* hypothesis, in these very same spots there had been previous fatal outbreaks of sore-throat, presumably contagious, at invervals of five, ten, fifteen, twenty-five, thirty, and even more years. These facts cannot certainly be explained on the doctrine of chance, and the liability of any place to importations of disease during a certain number of years; and they were for the most part isolated spots, some particularly so, and with very little intercommunication with other places. The important question whether these outbreaks resulted from persistence of infection which had regained activity in the presence of suitable subjects and other favourable conditions, or, as I

am inclined to believe, to the development under certain stimuli of an infectious disease from a natural telluric miasma, will be considered subsequently. I have inclined to the above conclusion because in these localities I invariably find the same prominent sanitary defects—viz., persistent structural dampness of the house, its foundations, and surroundings. To this point I shall again refer.

ANNUAL MORTALITY FROM DIPHTHERIA.

The following table (Table I) shows the total number of deaths registered as from diphtheria since the name first appeared in the records in the year 1855. On the point of

TABLE I.

Deaths from certain Causes and Rainfall; England and Wales, 23 years, 1855-77.

Year.	Rainfall in inches.	Deaths from Diphtheria.	Deaths from Fever.	Deaths from Scarlatina.	Deaths from Croup.
1855	21·1	385	16,470	16,929	4419
1856	22·2	603	16,182	13,557	5207
1857	21·4	1583	19,016	12,646	5279
1858	17·8	6606	17,883	23,711	6220
1859	25·9	10,184	15,877	19,310	5636
1860	32·0	5212	13,012	9681	4380
1861	20·8	4517	15,440	9077	4397
1862	26·2	4903	18,721	14,834	5667
1863	20·0	6507	18,017	30,475	6957
1864	16·7	5464	20,106	29,700	6777
1865	29·0	4145	23,034	17,700	5921
1866	30·7	3000	21,104	11,685	5168
1867	28·4	2763	16,862	12,300	4387
1868	25·2	3013	19,701	21,912	4491
1869	24·0	2606	18,389	27,641	4478
1870	18·5	2699	17,910	32,543	4302
1871	22·3	2525	15,790	18,567	4116
1872	30·0	2152	14,020	11,922	3640
1873	23·4	2531	13,553	13,144	4282
1874	20·0	3560	13,735	24,922	5010
1875	28·2	3415	13,063	20,469	4542
1876	24·2	2822	16,643	10,372	4204
1877	26·9	2522	9481	14,230	—

the total number of deaths statistics of diphtheria are peculiarly unreliable, because the term diphtheria is used by many to express a phase of certain other diseases as well as the specific disease itself; and one too frequently hears, and indeed sometimes sees in print, such loose statements as "scarlatina becoming diphtheria," by which I presume is meant simply that the bad throat symptoms of scarlatina have been developed. Whilst, on the one hand, however, many cases of scarlatina are entered as diphtheria, and the number of deaths recorded thus increased; on the other hand, many cases of undoubted contagious sore-throat are entered under croup and various other names, and the above error irregularly compensated for. Only the other day, in an epidemic of undoubted diphtheria, two fatal cases in one house were registered as "inflamed glands." I inquired of the medical attendant, who agreed with me as to the nature of the epidemic, his reason for not certifying these the same as other cases in adjoining houses treated by him; he replied (and according to the principle upheld by many with good reason) that he did not consider it justifiable to register any disease as diphtheria in which the false membrane was not plainly developed.

As to a calculation of the total number of cases estimated upon the basis of the probable number of non-fatal attacks to deaths, I do not think even an approximate estimate can be formed, because the course of the disease so entirely depends upon the conditions by which the patient is or has been influenced and surrounded, and a fatal termination to an attack or the reverse has seemed to me very generally entirely governed by these conditions.

Table I. shows the coincident annual mortality from diphtheria, croup, typhoid fever, and scarlatina. As regards our present subject, the most notable feature is the concurrence in the rise and fall of the mortality from diphtheria with that from croup. I am confident it would be a great advantage if both these terms could be done away with. For diphtheria, as before suggested, I would return to the old English term "contagious cynanche." Respecting croup, I am strongly of opinion that the majority of the cases returned are pathologically identical with diphtheria. Those cases of croup which are simply the result of local inflammation of the air-passages, produced by cold or otherwise, should be classed as inflammations of the parts affected.

THE CONNEXION OF DIPHTHERIA WITH METEOROLOGICAL CONDITIONS.

In attempting to trace out a connexion between meteorological conditions and disease, one has specially to beware of the besetting sin attending sanitary investigation, the liability to mistake coincidence for consequence. So far as annual rainfall and mortality are concerned, Table I. seems to indicate that there is no connexion between them; but the following table (Table II.), in which the quarterly mortality from diphtheria is given as far back as is obtainable from records of the Registrar-General, shows that the first and

TABLE II.

Mortality from Diphtheria, arranged according to Season, Rainfall, and Temperature.

Year.	First Quarter.			Second Quarter.			Third Quarter.			Fourth Quarter.		
	Deaths from diphtheria.	Mean temperature.	Rainfall in inches.	Deaths from diphtheria.	Mean temperature.	Rainfall in inches.	Deaths from diphtheria.	Mean temperature.	Rainfall in inches.	Deaths from diphtheria.	Mean temperature.	Rainfall in inches.
1870	710	38·0	4·1	524	54·4	1·2	581	60·7	5·6	883	41·6	7·6
1871	711	40·2	4·3	583	51·5	6·7	474	61·3	8·3	635	41·8	3·2
1872	586	43·6	6·5	475	52·8	5·7	406	61·1	6·5	525	45·3	11·3
1873	579	39·4	5·7	460	51·8	4·7	502	60·3	7·6	719	44·2	5·5
1874	783	41·4	2·4	668	52·8	4·2	719	60·9	6·2	950	42·3	7·2
1875	896	39·5	4·4	745	53·4	5·4	620	60·7	10·3	817	43·1	8·1
1876	861	39·8	4·9	627	51·7	3·5	601	61·8	5·3	733	47·0	10·5
1877	759	42·3	8·3	547	51·9	5·3	473	58·5	6·4	743	45·0	6·9
Mean	735	40·5	5·0	578	52·5	4·5	547	60·6	7·0	750	43·7	7·5

fourth quarters of the year are most favourable to mortality, and presumably to outbreaks of the disease. It may be that cold and damp weather favours the growth and development of the specific element which propagates diphtheria, aided perhaps by the cold winds of those seasons, which may, I believe, under favourable circumstances, act as the developing agent for the diphtheritic element. I have before stated that I believe there is a specific connexion between structural dampness of habitation and diphtheria; but by this I do not, however, mean the temporary dampness that would be produced by a heavy fall of rain, or in localities otherwise dry, by a damp season; and I have failed to find, after a special investigation, any excess of diphtheria at all in a district which during one part of every year is flooded by a river overflow, but quite dry during the other part of the year.

PERIOD OF LIFE MOST LIABLE TO SUFFER FROM DIPHTHERIA.

From the ages at death of nearly 70,000 fatal cases given in the Returns of the Registrar-General, I find that of every thousand fatal cases the age at death may be expected to be distributed as follows:—

Under 1 year	90
1—5 years	450
5—10 ,, ...	260
10—15 ,, ...	90
15—25 ,, ...	50
25—45 ,, ...	35
45 years and upwards	25

It will thus be seen that diphtheria is pre-eminently a disease of childhood, and this, taken in conjunction with the exceptional rapidity with which in some cases this disease prostrates the sufferer, has an important bearing upon one chief mode of dealing with ordinary infectious epidemics. I have repeatedly seen in reports on outbreaks of this disease that, in order to guard against similar outbreaks, a sanitary authority has been advised to provide an infection hospital. Now no one appreciates more than myself the value and necessity for all classes of such institutions, but every case should sail on its merits, and I do not think an infection hospital would ever be of much use in this disease because of the age of the sufferers. Mothers will naturally not part with their children, nor indeed is it reasonable to expect them to do so.

DIPHTHERIA IS THE TYPE OF PREVENTABLE DISEASE, partaking as it does of the characteristics of those two classes into which infectious disease, may be divided. It is in its origin and dissemination as intimately connected with structural defects, as enteric fever on the one hand, and on the other, like scarlatina, is very liable to spread by personal agencies. Moreover it has, I believe, an equal and somewhat similar claim with ague, to be considered a disease preventable by the removal of certain local conditions. When diphtheria gets an introduction to a house, if the children are living under good sanitary conditions, it generally falls lightly; but if the reverse is the case, and especially if they happen to be drinking excrementally-contaminated water, in its occasional appalling fatality (greater than that of any of our ordinary infectious diseases of the present day) the disease reminds us of those epidemics of the middle ages, from which we are happily now free. I have in my own personal experience been called upon to investigate cases where, in one visitation to each house only, diphtheria has proved fatal to fifty persons in fourteen houses. If isolation, disinfection, and cleanliness are neglected, diphtheria will spread, and prove terribly fatal under certain bad sanitary conditions; if, however, disinfection and isolation are properly carried out, in no disease may we count upon more favourable results.

The general history of an outbreak of diphtheria is as follows:—Either from direct importation, or in certain localities spontaneously a case appears in a house. If the children are living under good sanitary conditions it is simply called sore-throat, and the children are not even kept from school. These throats are speedily transmitted, and become epidemic over the district, attracting little notice till, meeting with a family living under very bad sanitary conditions, some fatal cases occur. In other cases the first cases are fatal because being under bad conditions, and there is then less likelihood of an epidemic, as the term diphtheria being used, precautions are taken.

My experience is, that the severity of the disease is directly influenced by the conditions under which the individual attacked is living, but that the tendency of the infection to spread is much increased, as in typhoid fever, by the disease passing through an individual who happens to be newly resident in a diphtheria locality, and, as in typhoid fever, such persons are particularly susceptible. Of the sanitary defects which specially govern the *mortality*, the most potent is undoubtedly excrementally contaminated water, and in nearly every case in which the disease has carried off whole families I have found this defect; I have also seen the converse, where an epidemic did not prove fatal in a single instance in a large number of houses using a common supply brought in pipes, but proved fatal to eight children drinking water from two contaminated wells. In its dissemination diphtheria is governed by much the same laws as typhoid fever, and, like it, may be spread in various ways by excremental agencies. I do not think that any amount of filth will generate diphtheria, but that, except in certain special localities, diphtheria is always the result of importation.

(To be continued.)

A CASE OF EPILEPTIC MANIA.

BY WILLIAM O'NEILL, M.D., M.R.C.P.L.,
PHYSICIAN TO THE LINCOLN LUNATIC HOSPITAL.

ON the afternoon of Sunday, July 29th, 1877, I was requested to see a Mr. T——, who had been taken suddenly ill about two hours previously. As I approached his house I heard loud voices proceding from within, and the struggle that was going on had attracted a number of people to the door. On entering the house, which was in the greatest disorder, I found five or six men endeavouring to hold on a couch the patient, who struggled violently with them, and endeavoured with all his might to bite, strike, and kick them; and at the same time he vociferated at the top of his voice the grossest abuse and the most insulting epithets at every person within his sight. Immediately on seeing me, however, he became calm and collected, and apparently in his right mind. He desired to shake hands with me, and became profuse in the expression of his thanks for some little acts of kindness I had shown him some years ago. I asked him what all the disturbance was about, and what was the matter with him. He answered that he did not know, but he believed those about him were determined to drown him. His head was hot, and in order to cool it his friends were very liberal in their application of cold water to it, and this fact may have originated the drowning idea in his disordered imagination, and may have acted as a motive to escape from the supposed danger. His answers to my other questions were quite coherent and to the point. He complained of severe headache, and of a feeling which he called "queerness all over." As might have been expected from his struggles and from the heat of the day, his pulse was rapid, and his body and even his clothes were wet with perspiration. His pupils were equal and acted normally; and he had no appearance of paralysis, nor had he any symptom of disease of the heart, lungs, or kidneys. The tongue was bitten in a prolonged fit he had before I saw him. I was told that when in the fit he was insensible, foamed at the mouth, and was frightfully convulsed; and that when he came out of the fit he immediately became just as I saw him—quite beside himself, and attempted to destroy everything and everybody that came in his way.

After making the necessary examination of the patient, and having also examined the arm of a man he had bitten, who was very apprehensive lest the injury should end in hydrophobia, I made a movement to go into the next room to speak to the patient's wife and relatives. Seeing this, he again became furious, and broke out into a torrent of abuse, which he continued whilst I remained in the house. I learned from the wife that a few hours previously he lost a brother, who lived a few doors from them, of an acute disease of a week's duration. As they were sitting down to dinner a girl ran in and told him his brother was dying, and that he was to go and see him as quickly as possible. The announcement was unexpected, and made so great an impression on him that he nearly fainted, and when he stood up from his chair he felt "almost paralysed." He "crawled" to his brother's house, however, just in time to see him die, and then left it immediately; but on re-entering his own house he fell into a fit. Of what occurred from the seizure till the following morning Mr. T—— has not the slightest recollection, except a faint remembrance of running after a man with a weapon he snatched up. I ascertained from the patient's relatives that no member of his family has ever been afflicted with insanity or epilepsy, that Mr. T—— has hardly been a day seriously ill in his life, and that this attack was the only one of the kind which he ever had.

The patient, who is middle-sized and rather anæmic, is twenty-nine years of age, married, and the father of two healthy children. He is a sober, inoffensive man, who has served an apprenticeship to a handicraft at which he worked sedulously till about a year ago, when, in consequence of his steadiness and good natural abilities, he was advanced to a situation of responsibility that entailed a great deal of

writing and considerable efforts of memory. This unaccustomed work, which extended from nine o'clock in the morning till from six to eight in the evening, combined with a sense of responsibility and a laudable desire to do the duties of his appointment well and correctly, brought on anxiety, sleeplessness, loss of appetite, and nervousness. He was therefore in a state of depressed vitality when the shock of his brother's death fell upon him.

On the following day, the 30th, when I called, I found Mr. T—— composed and rational, and it appeared that he had been so since awaking from sleep about 4 o'clock that morning. He remembered little or nothing of what occurred since his seizure the preceding day, not even my interview with him. His wife had told him something of the way in which he had been affected, which distressed him very much. He looked pale and exhausted, and complained of being bruised and sore, the result doubtless of his exertions and the grips of his attendants. He also complained of dizziness, severe pain in the forehead, and deafness. He could not bear to be in the dark, and would not allow a green window-blind to be drawn down to shade him from the rays of the sun which fell on his face.

August 4th.—The patient had regained some strength, and was able to walk for a few minutes in his garden. He still complained of dizziness and of sharp pain in the forehead, and he could not yet bear to be in the dark; consequently he had a lamp burning before him at night, and during the day he sat or lay exposed to the sun or strong light. He confessed to me that when male friends came to see him he was frequently seized with an almost uncontrollable impulse to "fly at them," and that it required all his power to wrestle with and to overcome these impulses. He never felt inclined to attack his wife or females, but men were the special objects of his aversion. These impulses to attack men, whenever and wherever he met them, troubled him for several weeks, and then gradually died out. They were evidently the insane promptings of a disordered mind, which, as the brain became healthy, gradually subsided.

Nov. 1st.—Since August 4th the patient had improved till the night of August 11th, when, probably in consequence of his having neglected to take his medicine for two days, he had a fit, which was followed by delirium of considerable violence. Subsequently he spent some time at the seaside, and derived benefit from the change of air. On the 20th of September he considered himself sufficiently recovered to resume a part of his work. He soon discovered, however, that his head could not bear the strain, for dizziness, headache, and nervousness returned; so he resumed quietude again. To this date his medicinal treatment consisted chiefly of bromide of potassium; at first he took the drug with a sedative, afterwards in combination with iron and nux vomica. I now prescribed a mixture composed of quinia and dilute muriatic acid, and since taking it all his disagreeable symptoms have gradually disappeared, and at the present time he considers himself to be in as good health as he had been at any former period of his life.

The predisposing and the exciting causes of the epileptic attack in this patient are marked with great precision. The case demonstrates the injurious effects which may be caused to the system by prolonged mental labour, especially when the person has been unaccustomed to it, and when it is accompanied by anxiety and loss of sleep. So long as brain-work is confined to reasonable hours, and is free from care and anxiety, and sleep and repose are sufficient to repair the waste of brain-tissues and to restore the brain's powers, intellectual labour is attended or followed, I believe, by little or no injurious consequences. The case also demonstrates the dangerous results which may follow the sudden and unexpected announcement of bad news to a person suffering from disease, or from a state of debility and nervous prostration. Very probably if this patient had not received the shock to his nervous system at a time it lay open to injurious impressions, or, having received it, he had been in the enjoyment of good health at the time, no epilepsy would have followed.

Mania, it is said, complicates about 10 per cent. of epileptic cases. In making this computation, I believe all degrees of severity and kinds of mental alienation are included. I have a patient at present whose mild wanderings are in strong contrast to the state in which Mr. T—— was after his two seizures. She is a stout, fair-haired, plethoric girl, of seventeen years of age, who has suffered for more than a year from amenorrhœa and epileptic attacks. This girl has regularly every month two or three fits, and for a few days requires to be closely watched, so as to prevent her injuring herself by falling or otherwise. She falls down without the slightest warning, generally biting her tongue more or less severely. The fits are followed by delirium, which lasts two or three hours, and during its continuance she moves about like one in a state of somnambulism, attempting to do the most absurd things, such as endeavouring to boil water in a wicker basket, and undressing her little brothers and sisters and putting them to bed at noon; and when she is prevented from doing such things as these, she becomes quarrelsome, and generally resists interference. The mania terminates with sobbing and a flow of tears, and she has no recollection of anything which may have occurred.

The case of Mr. T—— is also of considerable interest in a medico-legal aspect. Doubtless numerous acts of violence have been committed by persons whilst in a similar mental state to that of Mr. T—— during his illness. I believe many of the causeless and motiveless outrages which we hear of from time to time are perpetrated by epileptic maniacs during their temporary fury, and who, when they asseverate their innocence and want of all knowledge of their acts, may state the perfect truth, but, inasmuch as they may be perfectly sane at the time of being questioned or examined, they are not believed.

Lastly, the case suggests to all who desire to retain a sound mind in a healthy body, to take an occasional holiday, to husband their mental resources, and to avoid overstraining them, and to shun the canker care, for "where care lodges, sleep will never lie."

Lincoln.

NOTES ON ALTERATIONS OF THE LARYNX IN TUBERCULOSIS.

BY DR. CHARLES FAUVEL AND M. JULES ANDRÉ.

IT is not our intention to give here a description of the pathological histology of alterations of the larynx in cases of laryngeal phthisis, but to publish the result of our researches on the larynx of a tuberculous patient who died at St. Louis Hospital, in the service of Dr. Péan, and who had often been previously examined by us at our Clinique.

The alterations that existed upon this larynx extended all over the surface of the organ, and it was easy to see with the naked eye all the modifications that supervene during the course of tuberculosis. A point worthy of note was the fact that these alterations were principally situated on the adherent borders of the epiglottis at the basis of its laryngeal surface in the ventricles, on the superior vocal cord, which latter, however, was less implicated on its marginal border than was the inferior vocal cord.

The commissure had disappeared at the point where the inferior vocal cords attach themselves to the arytenoid cartilage. It had been destroyed by an ulceration with granulating borders and with a greyish fundus, followed by three smaller ulcerations situated on the free border of the cord. It is also worthy of note that neither the pharyngeal surface nor the free border of the epiglottis showed any sign of ulceration, but were œdematous owing to the close proximity of the ulcerations.

The whole extent of the mucous surface was œdematous, ulcerated, dotted over by small elevations which were irregularly distributed, lifting up the mucous membrane and forming little tumours varying in consistency according to the period of their evolution. These tumours were either isolated or assumed a linear distribution, leaving between them interstices, which, by the aid of the microscope, were shown to contain a great number of pus-globules, some few red globules, and epithelium at different stages of degeneration.

The sections which we made upon the larynx, which formed the subject of our researches, were made on the whole extent of the mucous lining, from the epiglottis down as far as the third ring of the trachea, and from the results obtained we deemed it advisable to divide our work into three parts.

In the first part we will treat of tubercles in general; the second will be devoted to the variations which these tubercles present according to their situation; and in the

third we will describe the alterations that supervene in the constituent portions of the organ—namely, cartilages, bones, and muscles.

The lesions which were found on nearly all the sections taken from the zone extending from the base of the epiglottis to the cricoid cartilage were so advanced that it would be extremely difficult to divide them. The mucous membrane in the neighbourhood of the arytenoid cartilages, and especially of the thyroid cartilage, was nothing but a granulating mass, irregular in aspect, but filled with cellules undergoing fatty degeneration, and numerous pus-globules. What we found there was what exists in the final period of decomposition of any tissue, irrespective of the cause that may have brought about that decomposition. Such was not the case in the portion of the mucous surface situated above the base of the epiglottis, or of that of the trachea, or on the free border of the right superior vocal cord. In these portions were found, in their primitive stage, all the series of development of tubercles. It is well to remember that in the parts just mentioned the epithelium which covers the laryngeal mucous membrane is not cylindrical, as in other parts, and that fact will lead us in another study to a new series of considerations upon the anatomy of mucous membranes in general, which appear to us to be of the greatest utility. We have remarked, however, upon our preparations that the granulations are generally situated between the portion of the mucous membrane that contains the glands, and the membrane immediately situated beneath the epithelium. They are generally found in the thin layer of connective tissue which contains a certain number of embryo-plastic nodules on its deep surface, and which is placed immediately under the subepithelial layer. However, this seat is not absolute, and we have found granulations in course of development upon our sections, situated in the thick connective tissue which surrounds the glands, placed in the third layer of the mucous membrane.

The granulations have the aspect of homogeneous masses, from one-tenth of a millimeter to a millimeter in diameter in general, and are composed of nodules of connective tissue (embryo cells). These nodules segment themselves and multiply, as stated by Ch. Robin, and the little masses which we have mentioned are formed by their multiplication. A

FIG. .—Primitive granulations. *a*, Small central cellules in course of disorganisation, very much pressed one against the other. *b*, Connective tissue in which the granulation develops itself.

portion of these masses come directly from the connective tissue, others appear in the neighbourhood of the vessels. We take care to note this disposition on account of the recent communications made by M. Charcot to the Société de Biologie.

It is a known fact that M. Charcot and his pupils, in an excellent work on the Tubercle of the Lung, consider as the type of the elementary granulation the granulations which have a giant cell in their centre; in such a manner

FIG. 2.—*a*, Giant cellule. *b*, Zone of large cellules. *c*, Zone of small cellules. *d*, Connective tissue.

that the elementary tubercle would be constituted by a mass of protoplasm surrounded by nodules, which cellular mass would itself be surrounded by a zone of large cells, encircled by another zone of small cells, the whole being deprived of vessels.

Our preparations contain masses which correspond perfectly with the descriptions which precede, but we do not think that the granulation as described by M. Charcot is primitive, and our opinion is founded upon the study of the variations the different tuberculous masses which we have before us present.

The granulations with centre giant cells are compound granulations, and the giant cell is only the result of the position of the tubercle. We entirely adopt the view taken of the case by M. Malassez—that is to say, that the primitive elementary granulation is composed of round cells (Fig. 1), and we do not see what there is to add to the description of the tubercle given some time ago by Ch. Robin, and taken up later by MM. Cornil and Ranvier.

If we allow that the primitive granulation is composed of round cellules which are hard to isolate, measuring from four- to ten-thousandth of a millimetre, and degenerating rapidly from the centre to the periphery, it remains to be seen why, in certain cases, one finds large cells with peripheric nodules placed in the middle of certain granulations in the proportion of about 1 to 5 or 10, according to our researches.

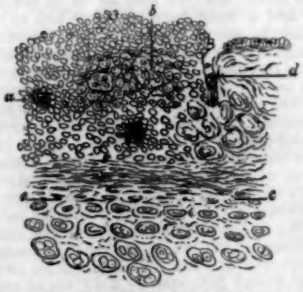

FIG. 3.—Mucous membrane of the trachea; epithelium destroyed. *a*, Primitive granulation. *b*, Granulation with a vessel in its centre, filled with fibrine with some white globules coloured by a solution of carmine (giant cell.) *c*, Cartilage. *d*, Section of the duct of a gland of the mucous membrane.

We believe it impossible to compare these elements to the similar elements described by Ch. Robin, and if their shape appears to be the same to a superficial examination, it is easy to see that their chemical reactions must be different. It appears to us more natural and more in accordance with the truth to look upon the central cellules of the tubercle as sections of vessels (Cornil and Ranvier) whose areas are filled up with a clot containing white globules which have either undergone colloid transformation or not. The opinion of the last-named authors appears so much the more well-founded, for the giant cells of the tubercle give, with certain colouring substances, a colour that the similar cells of Robin do not give, and it is worthy of note that certain giant cells of the tubercle—the youngest in all probability—are surrounded by a ring of elastic fibres which can be coloured by fuschine (Legros) or by aniline.

It results from a rapid examination of our preparations that the primitive granulation is always formed of the connective tissue, and that the few giant cells which are found in the centre or the periphery of the granulation are nothing but the bloodvessels or lymphatics, as is shown by their continuity and the great regularity of their form upon a large number of successive sections.

We have now to mention the alterations in the neighbourhood of the mucous membrane. The thyro-arytenoidean muscle was the one most affected in the larynx which we examined. Some of its fibres presented a regular waxy degeneration. The right arytenoid cartilage was in certain points completely destroyed; its chondroplasts were considerably widened.

On the base of the epiglottis was a lesion which we will take as a type for our description. Upon its border there was only some white, hard fibrous tissue to be found, enclosing large chondroplasts, which were composed of three, four, or five cells, very visible when coloured by concentrated eosine. Between these chondroplasts the fundamental sub-

stance was infiltrated with calcareous salts. Beneath the zone which we have just studied the chondroplasts had disappeared, and in their place was to be found some embryo tissue associated with a few spindle-shaped cells and a few adipose cells, the latter surrounding a few small vessels. In some places there was a veritable ossification in the midst of the cartilage.

Paris.

ON A CASE OF IMPETIGO FIGURATA SIMULATING LUPUS.[1]

BY WILLIAM YEATS, M.D., &c.

THE following case of impetigo figurata of the cheek is noticeable in its being a good specimen of the chronic form of the affection, and specially because in several particulars it strongly resembled lupus, and, further, if an inference may be drawn from one case, this affection may readily be mistaken. This form of impetigo is not rare, and has been recognised since pustular diseases were defined and classified by Willan and Bateman. The disease is figured by Rayer[2] *(Impetigo de la Joue)*, and also by Alibert[3] (*Dartre Crustacée Flavescente).* And were these drawings before the reader, it would be *apropos* to place side by side with them a representative plate of lupus on the cheek by Balmanno Squire;[4] and although these drawings are not exactly like each other, yet the last bears quite as strong a resemblance to the case below as the first two. It may be noticed also that Rayer's plate of lupus non exedens on the cheek is very like Alibert's impetigo figurata, and not unlike his own plate of the latter.

The patient, a girl, aged thirteen, with a good family history, and appearing to have a fair constitution and good physique, with no marked special diathesis, has been the subject of this cutaneous affection for more than six years. The history of the case is briefly this:—The disease was first observed about the middle of the right cheek, in the form of a small, well-defined, circumscribed, thick crust. After a time the crust fell off, when the affected surface presented a dark-red, livid appearance. These appearances,—viz., crusts and red patches—repeated themselves in succession almost up to the present time; while the edges, after some years, gradually became thickened and elevated, and the disease insidiously extended itself further and further on the cheek. Before the skin affection broke out the patient suffered from keratitis, for which she has been more or less specially treated ever since, and on this account about two and a half years ago she was sent to a country suburb of Manchester. After remaining there over a year, the disease on the face became interrupted in its course, the crusts gradually and entirely disappeared, the redness vanished by degrees, and the edges became thinned and were lost in the adjoining skin, the result being that the skin of the affected part presented here and there a white, cicatricial appearance, like a burn. After she returned to Manchester the disease reappeared, with the formation of crusts, followed by red patches, and the edges again became indurated and elevated. As the condition of the eyes had become worse, she was admitted to the infirmary under Mr. Windsor, to be treated for chronic keratitis with perforating ulcerations. About six months ago the skin disease was subjected to special observation and treatment. The following were the objective appearances:—On the right cheek, occupying an irregularly squarish surface, was a large, circumscribed, well-defined patch; in some parts of its surface red and livid in colour; in others (and this is to be noted) there were white cicatricial-looking patches; the edges—viz., the whole of the superior and inferior, most of the outer, and part of the inner were thick, indurated, and much elevated, and the lower half of the surface was generally thickened. The negative signs were not unimportant,—there were no pustules, no crusts, and no tubercles. The subjective symptoms were *nil*. There was also a very small circular crust on the upper and inner part of the nose opposite the inner angle of the eye, which had only broken out a week or two before the above appearances were noted.

While the case was closely observed for further manifestations or development, a number of tentative punctiform scarifications were made in the red patches after the manner of Volkmann and Dubina, when the skin was found to be firm, resisting, and tough, like natural skin, and not soft and easily penetrated. This proceeding was followed by an increase of inflammatory action, an eruption of psydracia, and crusts all over the affected surface and edges. It was also observed that the spot opposite the inner angle of the eye, which had been untouched, began to enlarge, developing first well-marked pustules followed by crusts. Shortly afterwards two other patches appeared, one on the chin and one on the eyebrow, both on the same side of the face. These developed, on a red base, characteristic impetiginous pustules, followed by crusts, and corresponded quite to the patches on the cheek and nose. Under treatment, the crusts on these two patches (on chin and eyebrow) fell off in about fourteen days, leaving the skin slightly red, which has gradually resumed its natural appearance and consistence. I would here notice that in the history of the case, previous to six months ago, no mention is made of pustules. This does not imply that they were not present, but that, from their small and variable size, their infrequent eruption, and short duration, they were overlooked; for, on one occasion about three months ago, when a number of psydracia were to be seen, the parent and patient only recognised the pustules when they were pointed out.

The treatment consisted in first detaching the crusts by emollient applications, followed by rubbing into the red patches underneath the ammonio-chloride of mercury ointment night and morning, at first of half strength, then after a time undiluted, and quinine was administered internally. Under this treatment the patient has improved much; there certainly has been no further extension of the disease; the edges have gradually shrunk to the level of the skin, the lower edge only remaining thick, though comparatively less; the red patches are paler; the white cicatricial-looking patches appear here and there, though they also seem less marked. The characteristic impetiginous pustules are developed, though only very occasionally, principally on the edges, and any crusts that form are now thin and lamellar. The case seems improved every week.

Before pointing out the interesting particulars of the case, I would very briefly mention the clinical and essential characters of impetigo and lupus.

Impetigo, according to most authors, is a non-contagious, non-hereditary disease of the skin, the most prominent symptoms being the presence of particular small pustules called psydracia, clustered together so as to form patches, which quickly discharge their contents, and are followed by crusts, which on falling off leave, as a rule, the skin reddish, which after a time becomes natural in colour and texture, though in chronic cases hypertrophy, induration, or atrophy may result. The essential characters of the disease are these. There is a true inflammation of the papillary layer and corium, attended with lively proliferation of the cell elements of the skin, and giving rise to new products, especially pus.

Lupus, in the same way, may be characterised as a local, non-contagious, non-hereditary, and never congenital disease of the skin. The principal clinical characters are the development of tubercles, which remain as such, or form nodules which either remain or undergo involution by absorption or by ulceration attended with scabbing or crusts, and resulting in all cases of cure in a cicatricial or scarred appearance. It may be interrupted in its course, heal by cicatrices, and break out afresh again. The essential character consists in an absolutely new growth of cells or neoplasm, and, according to the majority of authors, the corium *in toto* is the seat of the disease.

The characters of the case which simulate lupus are the following:—1st. The long duration of the malady, and the great resistance which it offered to cure; for many things had been done for it since its outbreak. 2nd. The situation of the disease is also a favourite one of lupus. 3rd. The interruption to the disease—which, as stated above, occurred about eighteen months ago—and its reappearance after a considerable interval resemble much the course of lupus. 4th. The occurrence of cicatrices which were the result of the apparent cure, the reappearance of the disease on these cicatrices as well as about their circumference, and the per

[1] Read at the Manchester Medical Society, and the case was shown at the same time.

[2] Atlas to Rayer's Theoretical and Practical Treatise on the Diseases of the Skin. London. 1835.

[3] Description des Maladies de la Peau. Paris. 1806.

[4] Photographs of Diseases of the Skin. London. 1866.

DISCREPANCY IN PRINT

manency of the cicatrices, all resemble lupus; which, when it does heal, always does so by cicatrices, which often are reattacked with the disease. 5th. As the disease spread only at long intervals, during those intervals no pustules were either observed or developed, so that at these times, if the crusts were excluded, there was little clue to the pustular nature of the disease, and then it resembled lupus more than anything else. 6th. The strictly local nature of the disease. 7th. The subjective symptoms were *nil;* neither are heat, tingling, or pain common in lupus.

After stating its resemblance to lupus, it is necessary to mention the characters which distinguish it from lupus and characterise it as impetigo. 1st. The occasional presence of impetiginous pustules followed by thick scabs distinguish it from lupus, while the history of the corresponding patches on the chin and eyebrow which ran through a quick course of pustulation, incrustation, and red patches, resulting, under treatment, in the perfect restoration of the skin, is almost sufficient to characterise the case as impetigo as distinguished from lupus, which is not, as generally believed, attended by pustules. 2nd. The crusts were peculiar to impetigo, and, unlike those of lupus non exedens, which form of lupus the case resembled in other respects; they were more like the crusts of lupus exedens, but then there was no ulceration in the present case. 3rd. The consistence of the red patches of the disease was found by the tentative scarifications to be firm, tough, and resisting; while in lupus the affected tissues are soft and unresisting. 4th. There were no tubercles, which is the principal clinical feature of lupus. 5th. The happy result of recent treatment favours this view of the nature of the case.

This case, like many other chronic cases, could not be understood from a single examination, nor by any individual character, such as pustules, to which Erasmus Wilson attributes much diagnostic value; or crusts, which Balmanno Squire says are more important for diagnosis than the pustules which produce them; but only by a knowledge of its whole history, and all its natural characters taken together, and by observing it from time to time in its different stages of varying duration.

The white cicatricial appearances of which so much has been said might be attributed partly to the chronicity of the case, but principally I think to the habit the girl acquired, on some advice, of tearing off the crusts, which she had done for a long period. In regard to this point, Mons. A. Hardy[5] states that amongst certain scrofulous children affected with impetigo of the face, when the crusts have been roughly torn off, or when the secretion has lasted a long time, and when the ulceration, ordinarily superficial, has been a little deeper, after the impetigo is cured some slight but conspicuous and persistent cicatrices may remain.

Regarding the indurated and elevated edges which were present, I believe they were accidental, and that they resulted from the continued inflammatory process and papillary hypertrophy. Some might say that these were the tubercular indurations of lupus, but though there are generally some swelling and induration there are seldom seen such elevations in lupus. There are but few cases of lupus recorded where mention is made of elevated edges, and—unless Squire's pustular lupus (to be afterwards mentioned) is an example of this—the only one I have met with is reported by Sir W. W. Gull in vol. ii. of the *Medical Times and Gazette* for 1866, where it is stated that "the centre was slightly ulcerated, and the periphery vascular, raised, and spongy." Further, were these elevations composed of lupus tubercles and granulation tissue, the resulting surface would be cicatricial, whilst in this case the cicatrices are only to be seen here and there on the surface, and certainly not seen on the sites of the recently thick and elevated edges.

Seeing that some weight was attached to the presence of pustules as one of the distinguishing features of impetigo, and to their absence in lupus, I cannot but mention that Balmanno Squire, in his Manual[6] and Atlas, gives a variety of lupus called pustular lupus. The characters of Squire's pustular lupus are these:—1. Raised livid patches. 2. Minute pustules. 3. Yellowish or dark-brown crusts; and on the crusts being detached there is seen a ragged shallow ulcer, covered with pink, flabby granulations. 4. Spreads by extension of livid elevations and fresh pustules, which, when they finally drop off, leave a cicatrix. All that I would say of this species is simply that it is very like the above case, barring the ulcerations, which, by the by, might and do sometimes occur in impetigo. Yet, though suppuration and pus are common enough in some of the stages of lupus, pustules are not; and if this form of pustular lupus of Balmanno Squire's, with such pustules, be admitted, it is easy to understand how the surgeon might hesitate to classify such cases as that detailed under impetigo, and would readily dub them the lupus which they simulate.

I would only further add that two great authorities have thought it worth while to point out the differences between impetigo figurata and lupus, though I question whether these can be of much practical value. The one is Rayer, who says "that the scabs of impetigo are yellow, prominent, and rugous, and slightly connected, especially on the face, and very different from the thick, brown, and adherent scabs of lupus exedens, which terminate in ulceration and cicatrisation." The other Balmanno Squire, who mentions that impetigo figurata may be mistaken among other things for pustular lupus, and that it may be distinguished from the latter by the absence of deep ulceration and of subsequent cicatrices.

Manchester.

[5] In the article "Impetigo," in the 18th volume of the Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques, page 437.
[6] Manual of the Diseases of the Skin (London, 1868).

THE DOSE OF HYOSCYAMINE.

BY J. G. SINCLAIR COGHILL, M.D., F.R.C.P. ED.,
PHYSICIAN TO THE ROYAL NATIONAL HOSPITAL, VENTNOR.

THE attention of the profession has lately been directed from several quarters to the efficacy of the alkaloid or active principle of hyoscyamus in the treatment of various forms of nervous disorder, principally the spasmodic or convulsive, and also in mania. There is no doubt we have in hyoscyamine a potent remedy in concentrated form, in striking contrast to the bulky, uncertain, and often inert preparations of hyoscyamus. Hyoscamine seems to be a nervous sedative of the highest order, acting secondarily as a hypnotic, and in some of its immediate physiological effects closely resembling atropine. My object on this occasion is not to discuss the morbid states in which hyoscyamine is indicated, but mainly to call attention to the necessity for caution in connexion with the dose of hyoscyamine which can be used with safety, as illustrated by a case in which I have just employed this drug. As stated in your issue of the 13th inst. by your correspondent, Dr. Percival, doses of one-sixth of a grain had been used with success by Dr. Oulmont in a case of tetanus, while he himself, acting on the experience of Dr. Robert Lawson in a case of violent mania, administered a draught containing *one grain* to a young girl suffering from hysterical convulsions. From my own experience I should say the drug could not have been pure. It is as well the profession should know as soon as possible that very alarming symptoms may be developed under the influence of even *half a grain*, and hence the necessity of giving smaller and repeated quantities rather than one large dose, the effects of which might be serious, if not beyond control. That this caution is not unnecessary is proved by my own very recent experience in a case of what I may term climacteric mania, which I shall very briefly state.

A. H——, an unmarried American lady, in her forty-seventh year, has for the past eighteen months been suffering from mania, with frequent acute exacerbations, apparently dating from the sudden suppression of the menses under the influence of a fright. She is of typically nervous temperament, and previous to the disturbance of her mental equilibrium had been most gentle in manner, affectionate in disposition, and highly artistic in tastes and accomplishments. She was sent to the Isle of Wight, in hopes that the change might do good, but without effect, and she was some weeks ago placed under my care here. Her condition was not encouraging. The pulse was never under 90, the temperature rarely below 100°, the pupils contracted, great difficulty in nutrition and medication, and, except when sleeping under the influence of sedatives, there was constant restlessness, incoherence, and violence. As every recognised remedy and mode of treatment had been tried in succession, I resolved to try hyoscyamine. I prescribed half a grain in solution, which was taken at 10 P.M. on Friday, the 19th inst. At 2 A.M. next morning (Saturday) I was sent for in

haste, as her relatives in attendance were greatly alarmed at her condition. I was informed that within an hour of taking the medicine involuntary twitching of the legs and arms commenced, with evident distress, great restlessness generally, and inability to speak or swallow. I found the pulse 120, small and jerky; the temperature 103·2°; the face flushed; pupils widely dilated; and the conjunctivæ injected. The tongue was dry and brown, and the power of articulation and deglutition almost suspended. The respiration seemed unaffected comparatively, but the patient was apparently in a partially comatose condition. As the symptoms closely resembled the physiological action of atropine, I injected half a grain of morphia hypodermically, which within an hour acted so favourably as to enable the patient to swallow small quantities of beef-tea and stimulants. At 11 A.M. I was informed the patient had slept well at intervals, the skin being bathed with copious perspiration; she had also been able to articulate and swallow with increasing facility. I found the pulse down to 75, and the temperature slightly above 98°, but she was, to my great satisfaction, comparatively rational and intelligent, but complained much of diplopia. Since then both her physical and mental condition have continued to improve, so much so that at my visit on Sunday morning she recalled me to express her solicitude about her sister's health, who, in the paroxysms of mania, had been the special object of vituperation and violence. I have since given her one-sixth of a grain of hyoscyamine with an equal quantity of morphia every third night. I am so encouraged by the ultimate results of the hyoscyamine treatment in this case that I shall not hesitate again to employ this powerful remedy; but I think the immediate effects of half a grain of the drug, such as I have described, strongly cautions the exhibition of a much smaller dose—say one-fourth, or at most one-third of a grain—until at least the tolerance of the patient has been tested; for had I given one grain, as recommended, I question very much whether my patient would have survived the ordeal.

Ventnor.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

CHARING-CROSS HOSPITAL.

COMPOUND COMMINUTED FRACTURE INVOLVING THE ANKLE-JOINT; ANTISEPTIC TREATMENT; RECOVERY.

(Under the care of Mr. BELLAMY.)

FOR the notes of this interesting case we are indebted to Mr. E. S. Pattison, Mr. Bellamy's house-surgeon.

Rebecca G——, aged fifty-nine, was admitted April 18th, 1878. On the evening of the date of admission the patient, while drunk, fell downstairs and sustained a simple fracture of the lower end of the tibia and fibula. She was then picked up by some friends, also drunk, and made to walk about. This made the fracture compound. The woman was then brought to the hospital. When admitted she was very drunk, and had an open wound about as large as a sixpence on the outer aspect of the right leg over the external malleolus. Some loose fragments of bone were found there by the house-surgeon, and from the escape of synovia there was evidently a fracture opening into the joint. The wound was dressed antiseptically, and the limb placed on a side-splint.

The wound was dressed again next day, and syringed out with a solution of carbolic acid (1 in 20). A good deal of blood had oozed out during the night. The limb about and above the seat of fracture was red and somewhat swollen.

On the 22nd the limb was swung in a cradle. The patient had passed a fairly good night, and there was not much pain or tenderness.

On the 28th the antiseptic dressing was left off. The discharge was profuse, and there was a good deal of bogginess about the adjacent parts. The surface looked foul and almost gangrenous. Poultices were constantly applied.

On May 2nd the wound looked unhealthy, and the swelling extended towards the foot and some distance up the leg. The patient's general condition was fair.

On the 9th an incision was made to the outer side of wound, and some matter evacuated. Poultices were continued.

On the 15th the poultices were still applied. The wound looked healthier. The discharge was puriform and partly bloody.

There was no material change during the next ten days. On the 27th Mr. Bellamy made an incision above the wound, and passed a seton through it to allow drainage from a pus-cavity existing there.

On the 31st a large surface of denuded bone could be felt at the bottom of the sinus, but no loose bone. The wound looked rather healthier, and the œdema of foot, which had been marked, was less.

On June 12th there was no great change in the case. The wound was kept open, and continued to discharge pus. After this, however, more progress was made. On the 25th the wound was nearly healed; the poultices had been left off, and the wound dressed with red lotion.

On July 1st the wound was entirely healed, and a plaster-of-Paris bandage was applied. On the 13th the patient was discharged cured.

Remarks.—The object of recording this case is to hint to the ordinary practitioner the value of the immediate application of the antiseptic method. No doubt, had the case been treated without this precaution, excision or amputation would have been necessary. The patient had every complication to fight against: her physical condition, atheromatous vessels, and a wound of the perineal artery (which, by the way, does not appear in the report)—all evidently a great strain upon her constitution.

CENTRAL LONDON SICK ASYLUM, CLEVELAND STREET.

INTESTINAL OBSTRUCTION; GASTROTOMY; DEATH.

(Under the care of Dr. LEDIARD.)

D. C——, aged twenty, labourer, was admitted on March 27th, 1878. He stated that he had always enjoyed good health up to the present attack, which commenced suddenly with pain in the abdomen five days before while he was drinking some beer in a public-house. He immediately went home, not many yards off, and passed a free motion. The same evening he had rigors for two hours, and took some brandy, but vomited soon after, and continued to vomit when any food was taken. The bowels acted three days before admission, but after that he had passed nothing, and the abdominal pain had persisted. For the last three days he had suffered from thirst, and his belly had been swollen from three to four days.

On examination, the patient was healthy-looking, of fair and fresh complexion, and well nourished. His expression was anxious, and he evidently suffered acute pain in the abdomen, which was swollen, tender, and tympanitic. The shape of the belly was somewhat unusual, the most distended part lying between the navel and the ribs, whereas the lower region tapered off towards the groins; girth, two inches above the umbilicus, thirty-two inches. He lay on his back with one arm raised above the head. No tumour could be felt in the abdomen. The distension was uniform, and the pain general. He could not bear the weight of the poultices applied on admission. Pulse 112, regular and a little jerking; respiration 40, shallow and thoracic; the skin felt hot and dry, but the thermometer registered 98·2° only after repeated trials. The patient had no inclination to go to stool; he had not passed any blood or mucus; the tongue was dry and brown in centre, but furred at the sides. He vomited constantly anything taken; urine muddy, with urates, sp. gr. 1022, no albumen. A simple enema was given, and opium ordered every four hours, with an effervescing mixture containing hydrocyanic acid.

On March 29th the expression was better; the bowels had

been slightly relieved by the enema, the motion being partially solid, but presenting nothing peculiar. The patient had not slept; sickness continued. Temperature normal; pulse 130. The tongue was red and moist. He sucked ice continually, but could not keep any nourishment down. Turpentine stupes were applied to the abdomen, and another enema was given. The sickness continued, but he slept a little next day, and respirations fell to 14. Thirst as before. One arm raised above the head. An enema brought away a solid and pale motion.

On the 31st the girth was 33½ inches. The tongue was the same as before; sickness was almost incessant, the vomited matter being inoffensive. The abdominal pain continued. Cold cloths were applied to the abdomen. Temperature 99·8; pulse 96.

On April 1st the vomited matter was yellow and stercoraceous. The girth was 33½ inches. There was a bitter taste in the mouth. The seat of the most intense abdominal pain was under the ribs on the right side and round the navel. There was hiccough for the first time. The stomach-pump tube passed five inches, and was then stopped by the promontory of the sacrum. Digital examination of the rectum gave negative results. Fifty ounces of warm water were injected into the bowel, but more would not pass. What was injected came away again very soon. The man had passed no flatus since admission, and now complained of feeling choked.

In the evening his symptoms were much the same, but the vomiting was worse. Accordingly at 10.30 the patient was chloroformed, and, with the assistance of Mr. R. W. Lyell and Mr. Ridley Webster, Dr. Lediard opened the abdomen in the middle line between the navel and pubes, and brought into view several coils of gut distended and acutely inflamed. On passing the finger within the peritoneal cavity, recent adhesions were found between the visceral and parietal layers of the peritoneum. The incision was enlarged to a little above the navel, and the finger passed among the coils of small intestine met with a band stretching from above downwards, and apparently causing constriction to the bowel at some point. The band was not very tense, and when brought to the surface was found to consist of a portion of the omentum twisted into a cord. A double ligature was applied, and the band was divided between with scissors, the only visible effect of this being to liberate another coil of gut, which protruded at the incision and showed no mark of constriction. The intestines were so inflamed and soft that the finger lacerated the peritoneum at one part during an attempt to draw the gut down a little. This was treated with a catgut ligature, and the wound was closed with deep superficial sutures, with some difficulty, owing to the inflated condition of the gut. Opium was continued.

He passed a restless night, sickness persisting, but the vomited matter was thin, watery, of dark-brown colour, and inoffensive. Next day the abdomen was much distended; expression anxious; temperature 96·6°; pulse 96; respiration 20. Opium continued; brandy, milk, and eggs were given frequently. At 6 P.M. he became uneasy; yellow vomiting returned, but without the fæcal odour. At 8 P.M. he was in pain and very restless. At 10.30 the pulse was 88, the temperature 96·6°; the expression was anxious. No motion had passed since the operation.

He had a restless night; stercoraceous vomiting returned, cold perspiration followed, and he died somewhat suddenly at 9·45 A.M. on April 3rd, about thirty-four hours after operation.

It was only possible to make an examination of the abdomen at the region of the wound. When the stitches were removed it was found that the small intestines were acutely inflamed, recent lymph and adhesions existing. No rupture of the bowel was found, the jejunum and ileum were much inflated, and contained a quantity of offensive contents resembling pea-soup. The upper end of the divided band was found continuous with the great omentum, which was folded across the upper part of the abdomen, where there was no peritonitis. On examining the pelvis, a coil consisting of five inches of the ileum near its end was found lying towards the right side of the sacral promontory. It was sphacelated, and bound down by a band, which constricted it against the brim of the pelvis. In this region there was intense peritonitis. The band was adherent to the pelvis on either side of the strangulated gut, which showed a broad groove where the band had passed across; and on tracing the band upwards amongst the coils of intestine, the divided end was found lying free. The ascending and descending colon was empty; the transverse portion was not seen. The divided band, on dissection, was found to be composed of omentum alone. The distal portion was condensed, matted, and converted into a cord-like structure. The vessels were filled with coagula, and there was also some bloody extravasation. The length of the band was five inches, the part causing the constriction being the terminal portion only. The catgut ligature was *in situ*.

Remarks.—The case is an important one, since it shows that division of the band only is not always sufficient to liberate strangulated gut. Now, if the lower end of the band had been followed downwards at the time of the operation, it would have been possible to break down the adhesions and released the bowel, but the intestines were in such an inflamed state that it would scarcely have been prudent to have subjected them to the pressure necessary for a more thorough examination for the exact point of constriction; even the first attempt to draw a coil down lacerated the peritoneum, as before stated. As to the mode of origination of the adhesion of the omentum no opinion can be offered. The adhesion was probably recent, because there was no difficulty in detaching the band from the margin of the pelvis. The appearance of the band, Mr. Lyell thought, was in favour of its having been dragged on considerably by the inflated gut. The post-mortem examination showed how rotten the gut was, for during the handling necessary it burst in several places, and deluged all with fæcal matter. If the operation had been performed before peritonitis was established, a more careful search might have been made for the exact spot of strangulation, and a very different aspect might have been given to the patient's chances of recovery.

SUSSEX COUNTY HOSPITAL.

ACUTE YELLOW ATROPHY OF THE LIVER.

(Under the care of Dr. KEBBELL.)

WILLIAM D——, aged twenty-four, coachman, was admitted April 27th, 1878. There was no history of syphilis, but he had been leading until recently a very intemperate life. His health, however, had been fairly good until about three weeks before admission, when he first noticed that his urine was high-coloured, and he began to have frequent attacks of giddiness, sickness, and vomiting, with general discomfort and weakness, which continuing to increase, he applied for admission into the hospital.

He was then very weak, had lost flesh considerably, face pinched, cheeks and lips dusky, skin generally of a dingy yellow tint, conjunctivæ jaundiced. Evening temperature 100°; pulse 84. The following morning, temperature 98·4°; respiration 20; pulse 96. Temperature never rose over 101°. Tongue moist, with thin white fur; breath had a peculiar earthy and livery smell, stated by Mr. H. N. Smith, house-surgeon, to be very similar to that of a patient who died of acute yellow atrophy in Guy's Hospital. The hard edge of the liver was felt just below the ribs, and dulness extended up to the fifth rib; splenic dulness deficient; pupils were dilated, even, but inactive; systolic murmur at base of the heart; breathing sounds healthy; he complained chiefly of feeling very thirsty, hungry, and weak; no vomiting or pain. Ordered a couple of calomel and colocynth pills, and to have gentian and ammonia mixture three times a day.

On the 29th the stools were reported to have a fairly healthy appearance. Urine contained copious deposits, chiefly of phosphates. No leucin or tyrosine was detected. From this time the man gradually became more drowsy, with active delirium at night. Continued to complain chiefly of excessive thirst, hunger, and drowsiness. The pupils became much dilated and very insensitive. The liver dulness diminished rapidly, and latterly almost disappeared. He died comatose and paralysed on May 5th about 5 P.M.

Necropsy nineteen hours and a half after death.—(Reported by Mr. H. N. Smith, house-surgeon).—Brain-substance generally soft, especially internally. The base of both lungs intensely gorged, sinking in water. The pericardium of the heart contained a small quantity of bile-stained serum, the heart weighing nine ounces and a quarter. Commencement of aorta slightly atheromatous. Spleen healthy, weighing three ounces and three quarters. Peritoneum healthy. The liver was very small, only thirty-one ounces, flabby, unable to support its shape; capsule loose and puckered,

The right lobe was marked on its surface by a few separate raised yellow patches. There were similar patches on the posterior part of the left lobe. The anterior edge of the liver was very thin, especially towards its right edge; in fact, the anterior and right quarter of the right lobe was a mere flabby tongue. On section the right lobe presented at its back part a mass of greenish-yellow tissue, or rather a collection of masses, partly greenish and partly yellow. In this part of the cut substance the lobular structure of the liver was still distinctly apparent, but easily broken down by pressure. The right half in front of this was very firm in texture, of a deep, reddish colour, compressed and fleshy in appearance, smooth, shiny, and depressed below the level of the yellow part of the section. Though in appearance the most healthy portion, on close examination no trace of liver substance could be found. Its appearance was that of collapsed lung, with quantities of small white specks dotted about, apparently sections of fibrous tissue, and not unlike Malpighian corpuscles of the spleen. The left half of the anterior part of the right lobe was much thicker, and consisted of the greenish-yellow substance above described. The left lobe of the liver was made up almost entirely of this greenish-yellow substance. It was less wasted proportionately than the right, and was altogether in a less advanced stage of disease. The bile-ducts were pervious, and the common duct communicated freely with the intestine. The gall-bladder contained some light-coloured thin bile.

Microscopically, fresh sections of the red and yellow portions presented different appearances. In the former (red) no remnant of healthy liver-structure was perceptible; there was no trace of lobulation (though some vessels were to be seen). This part was composed mainly of very shrunken and wasted cells (having no resemblance to hepatic cells), in which nuclei were visible, together with minute oil-globules and granules, and a considerable amount of indistinct fibrous tissue. The yellow portion consisted of multitudes of coarse, well-formed, granular and nucleated cells, comparatively healthy hepatic cells, but all huddled together without arrangement, and having a tendency to become disintegrated in many places. There was little or no excess of fibrous tissue in this part, but bright yellow pigment was collected in masses, and the whole section was more or less deeply stained of this colour.

PROVINCIAL MEDICAL SOCIETIES.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.—The meeting on June 19th was devoted to a paper by Professor RUTHERFORD, entitled "Experiments on the Biliary Secretion, with reference to the action of Cholagogues." Seventeen substances have been investigated since the last experiments were published. All the experiments were made upon the dog whilst under the influence of curare, artificial respiration being kept up. Observations were made at periods of fifteen minutes, each experiment lasting eight or ten hours. All the substances were injected into the duodenum as near to the orifice of the bile-duct as possible, and the following is a summary of the results obtained:—Dilute nitric acid stimulates the action of the liver. Physostigma is a powerful stimulant of the secretory action, and its effect is strongly antagonised by atropia, which has a negative influence on the secretion when injected alone. Menispermine, an impure resin derived from the yellow merilla of America, and administered in seven-grain doses in some forms of dyspepsia, did not affect the liver, but acted as a stimulant of the intestinal glands. Baptisin, derived from the baptisma tinctoria, and used in America in the treatment of scarlet fever, typhoid fever, and gangrene, stimulates both liver and intestine. Phytolacein, like the two foregoing, an American eclectic medicine, is derived from the Phytolacea decandra, and is given in quarter to one-grain doses in chronic rheumatism, and in larger doses as a purgative. It acts upon the liver, its action continuing for two hours; it is antagonised by atropia. Benzoic acid has but little action, sodic benzoate a decided effect, and ammonia benzoate a powerful action on the liver, but not on the intestinal glands. Ammonium phosphate excites the liver briskly, and its effect persists for about three hours. Sodium salicylate powerfully stimulates the liver, but has no action on the intestinal glands. Morphia does not prevent its action, if injected during or before the experiment. Tannic acid has no effect. Hyoscyamus causes a slight fall in the amount of the flow of bile. Morphia diminishes the secretion, but sodium salicylate given during the action of morphia rapidly re-excites the flow of bile. Acetate of lead diminishes, and potassium iodide neither increases nor depresses the action of the liver. Veratrium acts as a stimulant of the intestinal glands, but not of the liver. The action of the cholagogues is not by increasing the secretions of the whole alimentary tract, for some, as gamboge, which stimulate the whole mucous tract, do not excite the liver. Nor is it by increasing the blood flow, for substances stimulating the intestines, and thus causing portal congestion, do not increase the flow of bile. But they act either by stimulating the hepatic cells or the nerves which preside over them. If a purgative agent only stimulates the intestinal canal, it diminishes the secretion of bile by draining the portal vein, and by carrying off the bile-forming substances in the intestine, thus depriving the liver of its supplies in a double manner.

Reviews and Notices of Books.

On Harelip and Cleft Palate. By FRANCIS MASON, F.R.C.S., Surgeon and Lecturer on Anatomy at St. Thomas's Hospital, &c. With 66 Illustrations. London: J. and A. Churchill. 1877.

MR. MASON has written a much-needed book on two important subjects, and he has written well. In this country the operations for the cure of harelip and of cleft palate have for many years possessed quite a special interest. Improved and simplified by the clear thought and the rare manipulative skill of the late Sir William Fergusson, these operations have become almost as familiar to the non-professional public as to medical students and surgeons themselves.

As compared with larger and more showy operations, the closure of cleft palate may appear a small and trivial matter. A little experience and reflection will suffice to correct this opinion. The defective nutrition that supervenes on cleft palate or harelip, the great personal inconveniences, the numerous and special difficulties in the operation for its closure, the subsequent risks, and the many possible sources of failure, all conspire to raise the cure of cleft palate to a place among the capital operations.

The lessons inculcated in Mr. Mason's book will greatly assist in ridding this defect of some of its most serious annoyances, and facilitate the wider adoption of operative interference. There is scarcely any question in connexion with the cause, symptoms, or treatment of harelip or cleft palate which is not adequately answered. The best time for operating, and the best kind of operation, are as fully considered as the best form of instruments and the most proper mode of after-treatment. Besides this, the book is largely and excellently illustrated, and well got up in every particular.

We should have been glad to have had a fuller consideration of the primary and essential causes of cleft palate, but perhaps Mr. Mason deemed it outside a surgeon's province to trace congenital defects into an intra-uterine period. We believe that Dr. Haughton, of Dublin, ascribes cleft palate to a deficiency of phosphates in the mother's diet during pregnancy. At all events, it was found, in the experiments in lion breeding at the Dublin Zoological Gardens, that as long as the lioness was fed on beef or horse-flesh, her cubs were born with cleft palates, but when she was fed on fresh goats, the cubs were born perfect. It would be an equally fruitful field for investigation to ascertain the causes of cleft palate in the human subject, with a view to its prevention.

On the Treatment of Wounds. Clinical Lectures by SAMPSON GAMGEE, F.R.S.E., Surgeon to the Queen's Hospital, Birmingham, &c. With Engravings. London: J. and A. Churchill. 1878.

THE great merit, and, to a thoughtful mind, the chief recommendation, of Mr. Sampson Gamgee's book is the fact that it contains very little that is entirely new. But, on the other hand, the way in which it illustrates and exemplifies the truth and value of the ordinary principles of surgery is deserving of very great praise. Mr. Gamgee is evidently not one of those who fancy that it has been reserved to this generation to discover *all* the principles of the healing art. However much the surgeons of this age may have modified, improved, and elaborated modes of practice, they can scarcely claim to have done more than follow up the indications laid down for them by their great progenitors. Indeed, the whole moral of Mr. Gamgee's lectures may be summed up in his concluding words: "Given average manual dexterity, surgical success has come to be, in great measure, a question of accurate and painless, simple and watchful dressing." These words may appear trite and common-place, but they are true, and pregnant with meaning to those who can read them aright. To see their full import and meaning it may be necessary to peruse Mr. Gamgee's book, and if not necessary, the task at all events will be pleasurable and profitable.

In these days of elaborate and complicated specialisation in operating and in dressing wounds, it is positively refreshing to be assured by an experienced practical surgeon that dry and infrequent dressings, accurate adaptation of the lips and surfaces of wounds, gentle compression, efficient drainage, complete rest, accurate support, ordinary cleanliness, and proper care and attention have not lost all their virtue in the treatment of wounds. Mr. Gamgee fortifies his statements by interpolating a number of well-observed cases, many of which are not less convincing than surprising.

Congenital Occlusion and Dilatation of Lymph-Channels. By SAMUEL C. BUSEY, M.D. New York: William Wood and Co. 1878.

THIS is a book which does not call for extended criticism. The only point, indeed, in which it can be justly criticised is in the want of some concise and clear subdivision of the wide subject which the author has undertaken to expound. Had he only bestowed some pains upon this essential feature in every scientific work it would have greatly enhanced its value. But, as a compilation and a very exhaustive and laborious one, the book is deserving of much commendation. It is the first attempt known to us to collate all those rare cases of lymphatic tumours and overgrowths which are scattered throughout medical literature of all countries. Dr. Busey in this essay has gathered no fewer than eighty-seven cases, a large number from foreign sources, and has given their details in the form of a digest or summary of each case. The field traversed comprises the new growths known as lymphangiomata and their allies, many of which result from congenital occlusion or dilatation of lymphatic channels. For this arduous undertaking, to which he was stimulated by having had an instance of the kind under his own care, he merits the thanks of the profession, and we may venture to predict that his book will be frequently referred to when any of these cases come under observation. Elephantiasis and lymph-scrotum of course embrace a large number of these cases, but we do not find much reference made to the interesting discovery of the filaria and its connexion with these affections and with chyluria, and no light is thrown upon the mysterious subject of chyluria itself, about which, in spite of many recent observations, we are as much in the dark as ever. The text is profusely illustrated with woodcuts, and the book is altogether a novel one, but withal one that is very hard reading. The cases described are among the most remarkable that are met with in the whole field of pathological anatomy.

Battey's Operation. By J. MARION SIMS, A.M., M.D. London: T. Richards. 1878.

IN this *brochure* Dr. Sims reviews the subject of what is called "Normal ovariotomy," or, as Dr. Sims names it, "Battey's operation." Dr. Sims gives a synopsis of twelve operations performed by Dr. Battey, and seven by himself, and then analyses the whole "with the hope of deducing more exact rules for our future guidance." . . . . "Of Battey's twelve cases, two are marked improved, four not improved, two died, and four were cured perfectly." Out of seven cases operated on by Dr. Sims one died, in one the operation was not finished, three were made worse by the operation, one was greatly improved, and but one was perfectly and permanently cured. Dr. Sims advocates the operation on the ground that without operative procedure these cases are all hopelessly incurable. Pelvic inflammation seems to be a common consequence of the operation, whether successful or not. Dr. Sims advocates operation by abdominal section, instead of by the vaginal route, and the removal of both ovaries.

It appears that the operation has been performed in all twenty-eight times, with five deaths, the other operators being Hegar, Trenholme, Gilmore, Peaslee, and Sabine. The two first-named removed the ovaries with the view of arresting the hæmorrhage from uterine fibroids, and, according to Dr. Sims, with a gratifying meed of success.

Highly successful as ovariotomy is when the operation is undertaken for the removal of tumours of the organ, an operation of like gravity is not to be lightly undertaken for the relief of its minor ailments. There can, however, be no doubt that removal of ovaries which, though but little or not at all enlarged, are the seat of very painful disease, may sometimes be justifiable when the diagnosis is clear, and relief cannot be obtained by other means. We apprehend that such cases are rare, and that it is incumbent on the surgeon not without deliberation to resort to an operation which not only jeopardises his patient's life, but runs the risk, even when successful as regards immediate recovery, of failing to relieve the troubles for the cure of which it was performed.

OUR LIBRARY TABLE.

Other Worlds than Ours. The plurality of worlds studied under the light of recent scientific researches. By RICHARD A. PROCTOR, author of "The Orbs around us," &c. Fourth edition. London: Longmans, Green, and Co. 1878.—Of the making of Mr. Proctor's books, and of the multiplication of their editions, there seems to be no end. But, unlike most men who have an itching for writing, Mr. Proctor generally has something that is worth saying, and always knows how to say it. The fact that this work has reached a fourth edition is at once an indication that the author has, apart from the spirited controversy of Dr. Whewell and Sir David Brewster, lighted upon a subject of general interest, and a proof of the clearness and even fascination of his style. Mr. Proctor tells us in the preface to this edition that three important recent discoveries either correspond with the views expressed by him in previous editions of this work, or supply new and strong arguments in favour of the theory of cosmic evolution, advanced in the chapter on "Meteors and Comets, their office in the Solar System." These discoveries are the presence of oxygen in the sun, the fading of a "new star" which appeared in the constellation of Cygnus into a planetary nebula, and, lastly, two very small moons circling around Mars in about 30¼ hours and 7¾ hours at distances from his centre of about 14,000 and 5600 miles respectively.

Brain: a Journal of Neurology. Edited by DRS. BUCKNILL, CRICHTON-BROWNE, FERRIER, and HUGHLINGS JACKSON. Part II.; July, 1878. London: Macmillan and Co.—It is perhaps too soon to make any predictions respecting this periodical. The second number may be up to the level of its predecessor, but there is a vague feeling that it does not rise much above mediocrity. There seems, for instance, to be a want of spontaneity and a lack of energy that a new journal with lofty aims should not exhibit. It is not that the original articles are inferior; they are all worth perusal, and two or three have considerable merit, but not one can be classed as first-rate. Dr. Brunton contributes a suggestive and instructive paper on "Reflex Action as a Cause of Disease and Means of Cure"; and Dr. Milner Fothergill a pleasantly written article on "Neurosal and Reflex Disorders of the Heart." We may be pardoned for pointing out that *Brain* requires more master-touches from the strong hands that direct it. Perhaps if there were fewer external aids there would be a greater manifestation of native strength.

Atlas der Gewebelehre des Menschen und der höheren Thiere. Von Dr. E. WENZEL. Heft I. Dresden: Meinhold u. Söhne.—This Atlas of Histology is to be published in from six to eight parts. The present part contains eight plates and thirty-two pages of letterpress. The plates are done on stone, and are of rather unequal execution, some of the figures being a trifle coarse, while others are drawn with considerable delicacy and finish. The subjects of the plates are: 1, 2, and 3, cells and their modes of multiplication; 4, forms of glands; 5 to 8, the principal forms of connective tissue, including cartilage and bone. The microscopic powers used vary from that of a hand lens to 800 diameters, and the drawings have been made by Fr. Fœdisch. We have no doubt the work will prove useful to students by indicating to them what they should see, and the drawings are less conventional than the majority of those met with in text-books; but we would counsel all students to become familiar with the tissues by direct examination rather than by plates.

Natural Philosophy for General Readers and Young Persons. Translated and edited from Ganot's "Cours Élémentaire de Physique" by E. ATKINSON, Ph.D. and F.C.S., Professor of Experimental Science in the Staff College. Third Edition. London: Longmans, Green, and Co., 1878.—It is so short a time since we commended the second edition of this book that we need only point out the latest improvement. Although little has been added to the present edition, emendations have been made wherever necessary, and the work has been made more suitable for the purposes of self-instruction. There are seventeen pages of new matter, and twenty-five additional illustrations. Besides this, a valuable appendix is given of sixteen pages of questions, systematically arranged, in reference to the corresponding parts of the book, and designed to serve as a sort of self-examiner to those who have not the opportunity or advantage of formal instruction. It would be difficult to speak too highly of the merits of the book, which is perhaps without an equal as a text-book for those who are preparing for the preliminary examination for the medical profession.

Milk Fever. By ARTHUR V. MACAN, M.B., &c. Dublin: John Falconer. 1878.—Dr. Macan reviews the various theories of the production of milk fever, and gives an excellent historical account of them. His own conclusions are as follows:—"1. There is no rise in temperature necessarily accompanying the first secretion of milk. 2. Pain and distension of the breasts may cause fever; but this fever differs greatly from that generally described as milk fever. It comes on somewhat later, and lasts much longer; for, while milk fever is said usually to terminate in from eight to twenty-four hours, this fever, in 65 per cent. of the cases, lasts more than twenty-four hours, and does not, I think, so frequently terminate in profuse sweating. 3. The pulse in these cases is much slower than the temperature would seem to warrant. 4. In cases of fever, during the puerperal state, the presence of full breasts is not sufficient justification for at once diagnosing the case as one of milk fever."

On the Pathology and Treatment of Membranous Dysmenorrhœa. By JOHN WILLIAMS, M.D. London: J. E. Adlard. 1878.—This is a reprint of a paper contained in the nineteenth volume of the Transactions of the Obstetrical Society of London, which we have noticed elsewhere. Dr. Williams gives particulars of fourteen cases, in most of which he repeatedly made microscopical examinations of the expelled membranes, interesting details of which are given. He attributes the affection to the presence of an excess of fibrous tissue in the wall of the uterus, and says, "The presence of an excess of it in the uterine wall probably gives rise to the fibrillar character of the matrix of the decidua, and is the cause of the resistance offered by the membrane to the disintegrating process going on during menstruation." It may, however, fairly be questioned whether fibrousness of the wall of the uterus can affect the character and structure of a product of the mucosa; and it is quite certain that in the majority of cases of so-called "areolar hyperplasia" no such membrane is expelled, though, according to the author's views of pathology, this should be a constant occurrence. The subject, therefore, still remains in an unsatisfactory state.

Transactions of the Obstetrical Society of London. Vol. XIX. 1877. London: Longmans, Green, and Co. 1878.—The present is the nineteenth volume of the Transactions of this flourishing Society, which in as many years has attained a position of authority and influence seldom if ever before equalled by a kindred institution. We have had the curiosity to count the number of ordinary Fellows, and we find the figures to reach the large total of more than seven hundred. The present volume constitutes an interesting record of the Society's work during the past year—consisting of rare specimens, new or modified instruments and other inventions, instructive cases and more or less valuable papers, with the sometimes more useful discussions thereon. Among the more prominent subjects may be mentioned a paper by Dr. Braithwaite on Retroflexion of the Unimpregnated Uterus, one by Dr. Williams on the Pathology and Treatment of Dysmenorrhœa, one by Mr. Spencer Wells on Additional Cases of Ovariotomy performed during Pregnancy, and one by Dr. Galabin on the Choice of the Leg in Version.

On Hæmaturia as a Symptom of Diseases of the Genito-Urinary Organs. By O. HOFF, M.A., ex-Visiting Surgeon, City and County Hospital, San Francisco, &c.—We are unable to say anything in commendation of this little book, for the author entirely fails to make the diagnosis between the various causes of this symptom in any degree plain. We are told that stricture of the urethra "often gives rise to copious unexpected hæmorrhage, continuing several days;" and this statement is apparently based on the fact that the author has met with two cases of hæmaturia in patients who were also the subjects of stricture. This is a fair example of the careless and inaccurate way in which the book is written.

London University Calendar. 1878.—The most interesting part of this Calendar is the table of the results of the various examinations. We notice that there has been a steady increase in the number of candidates for matriculation, but that in the last two years there has been a falling off in the number of candidates for the preliminary scientific examination. It is noticeable that the percentage of rejections at the first and second B.A. examinations is higher than at the corresponding examinations for the degree of M.B.

THE LANCET.

LONDON: SATURDAY, AUGUST 3, 1878.

WE are now in August. The grouse are beginning to quake. Yet up to this moment the Government have not been able to scrape together enough resolution to say that their Medical Bill must for this year be abandoned. Nay more. So late as Thursday, July 25th, to the surprise of all quiet people, Lord GEORGE HAMILTON gave notice of three long pages of amendments which he is to move in committee on the Medical Acts Amendment Bill. But in all the three pages there is not a word about the reconstruction of the Medical Council. Our readers will be curious to know what all these amendments are about, and we must try to explain them. In the main they are intended to give effect to the wishes expressed by the Medical Council at its late meeting. It will be remembered that, according to the last form of this chequered Bill, the Conjoint Boards which it created were to give a qualifying certificate to each person who had passed their examinations, certifying that such person had shown by so passing that he was qualified to practise Medicine and Surgery, including Midwifery. On the strength of receiving from the Boards a list of the names of the persons who had passed, the registrar was empowered to register them, without reference to the possession of any diplomas from the medical authorities. In short, the registrable thing for the future was the qualifying certificate—qualifying completely in Medicine, Surgery, and Midwifery. The ordinary diplomas were henceforth to be merely honorary distinctions, not legal qualifications. This was considered by the bodies an unmitigated catastrophe; and with great unanimity they came together in June to avert it. They spent three days in declaring themselves opposed to a change which deprived their individual diplomas of "qualifying" virtue, and dealt, as they thought, a deadly blow at the connexion between members of the profession and its ancient corporations—a connexion which they deemed most beneficial in maintaining the professional spirit and high-toned professional conduct. The Government has always shown itself very amenable to the wishes of the Medical Council. Accordingly the principal of Lord GEORGE'S amendments have reference to the feelings of the Council in regard to the details of registration. They provide that a person who has obtained the qualifying certificate shall obtain for the purpose of registration, "*except in case of such refusal as hereinafter mentioned*, some medical diploma or diplomas, whether degree, membership, associateship, or other qualification, from one or more of the medical authorities for the said part of the United Kingdom." "The case of refusal" so delicately provided for in a subsequent amendment is doubtless the case of a Corporation refusing to give its diploma or to give anything tantamount to a qualification to a person who has passed the Conjoint Board, either "on the ground of sex," or on any other ground, or no assigned ground whatever. In such a case it is provided that the person so refused shall be entitled to be registered in the Medical Register on the strength of the qualifying certificate, and without obtaining a "registration diploma." And it is further provided that nothing in this section shall oblige any Medical Corporation to grant a registration diploma, and a person obtaining a "registration diploma" shall not, except so far as the Medical Corporation otherwise in their discretion shall provide, be entitled to any share in the government, management, or proceedings of that Corporation, or to any rights or privileges in connexion with that Corporation."

Such are the clauses by which the feelings of the Corporations, including particularly the feelings of the College of Physicians, are to be saved in the matter of admitting women. This may be a great and profound stroke of medical statesmanship, but it does not appear very successful to us. It does not exclude women from the profession; they are to be examined by a Conjoint Board in which every University and Medical College and Corporation in the kingdom is to be represented, including the College of Physicians. They are to receive a qualification in Medicine, Surgery, and Midwifery from this Board. It is small consolation to those who object to their being members of the profession, that they are not members of the College of Physicians. Nor, on the other hand, will it be much loss to women, as compared with men, who pass the Conjoint Board, to have no share in the management of the College of Physicians. In none of the Colleges have mere members any such share. If women are to be admitted into the profession, it is very doubtful whether it is wise to admit them on a different footing from that of men, and apart from a connexion with Corporations who are supposed to have great judicial powers, and to exercise wholesome ethical influence. But such is the drift of the chief amendments, and such is the kind of work with which Lord GEORGE HAMILTON proposes to take up the time of members in the beginning of August. We cannot believe that the House will undertake such duty, or that on mature reflection Lord GEORGE HAMILTON will urge it to do so. We construe his reply to Dr. PLAYFAIR as an admission that the chances of the Bill becoming law this session are very slight.

But other amendments introduced by Lord GEORGE HAMILTON make it far more imperative to abandon the Bill for the present session. We refer particularly to those amendments of Clause 13, page 8, which give the power to the General Medical Council to cause examination rules to be framed, and, in the event of the rules in force in any part of the kingdom being unsatisfactory, to require them to be revoked or altered by notice served on the authorities. In the event of the authorities not acting in conformity with the notice of the General Medical Council, the Council may undertake the framing of such rules as they think expedient. This is a great power to give the Council. But it is only by giving such a power to a Medical Council that anything like efficiency and uniformity can be secured in the examinations in different divisions of the country. It will perhaps be said, Then why not pass such amendments without the delay of another session? For the powerful reason that the Bill makes no alteration in the General Medical Council. Without such alteration, it is useless to give power to the Council to frame rules. Twenty years'

experience has shown that, constituted as it is, it has no disposition to use power of this sort. The Council is a pleasant body, eminently fitted for an annual session in the middle of the London season, but for strongly controlling the qualifying examinations of the country, as they will have to be controlled, it is eminently unfitted. This is the reason why we should advise the opponents of the Bill to sanction the passing of no measure which does not include provisions for altering the Medical Council so as to make it effective, and above all suspicion of mere corporation interests. We sympathise with the Duke of RICHMOND in not seeing his work completed this session. But it is too good work to be done hastily and imperfectly; and those who ask for further evidence to be taken before the work is closed are its best friends, and the best friends of the Government.

THE precise mode in which secretion is effected is still, notwithstanding all the attention that has been bestowed upon it, shrouded in considerable mystery. In the case of the kidney, various evidence tends to show that the watery part is eliminated at one part and the salts at another, but scarcely any positive facts of this nature are known in regard to other secretions. An able article has, however, just been published by HEIDENHAIN in the last part of PFLUEGER'S *Archiv*, which seems to throw some light on the point in question. The proposition Professor HEIDENHAIN endeavours to establish is that the secretion of water and salts on the one hand, and of organic material on the other, are not in direct causal connexion with each other, but are separate acts under the control of two different sets of nerves, the secretory and the trophic, which, however, for the most part, run in the same nerve-trunks. The facts on which he relies to prove this are, that whilst the activity with which saliva in the case of the submaxillary gland is secreted augments with the degree of stimulation applied to the nerves, provided these are not exhausted, the percentage of salts increases likewise to a certain maximum, quite independently of the previous condition of the gland. On the other hand, the percentage of organic matter it contains, though also augmented with the degree of stimulation applied to the nerves, does not bear a constant ratio to this, but is strongly influenced by the previous condition of the gland, and especially by the intensity and duration of the previous excitation. If the gland be continuously excited for some time, it will be found that though the quantity of the saliva—i.e., the quantity of water—remains the same, as well as the amount of salts it contains, the proportion of organic matters gradually decreases, because apparently the amount of pabulum in the gland is used up. That variations in the elimination of the watery and saline parts of the saliva on the one side, and of the organic matters on the other, do not run a parallel course, is further shown by several experiments. In the first place, taking a fresh and unexhausted gland, if the strength of the stimulus be gradually increased, the flow of saliva augments, and with it the proportion of both organic and of saline constituents, but the former in larger proportion. But if to a gland already exhausted a still stronger stimulus be applied, although it appears to respond to the lash, it does so only so far as the watery and saline constituents are concerned, the organic material either actually diminishing, as occurs with a moderate increase in the strength of the current, or requiring a very strong current to produce a very slight increase, and even this, if the gland be much exhausted, may altogether fail. Lastly, if in a fresh gland the stimulus be gradually increased, and then again diminished, in intensity, the quantity of the saliva as well as of the saline and organic constituents will be found to rise and fall, but not in equal proportion, the watery and saline parts diminishing to a greater extent than the organic, the difference being better marked the more intense the temporary increase of stimulation is, from whence HEIDENHAIN concludes that a very strong stimulus leaves a secondary or after-condition which renders the gland more disposed to eliminate organic matter. It would thus appear that there is an intimate connexion between the water and the salts of the saliva, the proportion of these rising and falling together in accordance with variations in the strength of the stimulus; whilst the amount of the organic constituents, though broadly agreeing with these in its variations, yet follows laws of its own; and it is this difference which leads him to think that the elimination of the watery and saline constituents is under the control of one set of nerve-fibres, the secretory, whilst the organic substances are subject to the influence of another set, the trophic nerves.

Professor HEIDENHAIN next proceeded to investigate the relations of the parotid gland, which, as he remarks, there is no ground for assuming should necessarily present the same behaviour as the submaxillary to the nervous system. He corroborates LOEBS' statement that the motor nerve of the gland runs in the nervus petrosus superficialis minor, and points out that the parotidean saliva is not always so watery as is generally supposed, that it is liable to remarkable variations in regard to the amount of organic and inorganic constituents, and that, under different conditions, the quantity of the latter held in solution is double, and of the former twenty-five times, the ordinary amount. In regard to the influence of stimulation of its nerves, the effects are in all respects similar to those already described in speaking of the submaxillary gland. He found, moreover, that the sympathetic nerve possessed a powerful influence over it; since if this was stimulated shortly before, or coincidently with, JACOBSON'S nerve, there was an immediate increase in the quantity of organic substances eliminated by the gland, though there was no increase in the absolute quantity of fluid discharged. The sympathetic contains the vaso-constrictor fibres of the gland, and it might be supposed that the change in the secretion was due to changes in blood-supply, but a very curious fact came out from his further experiments—namely, that ligature of the carotids, though somewhat diminishing the absolute amount of saliva eliminated, had no influence on the solids it contains, either in the case of the parotid or of the submaxillary gland, which shows well the complete independence of secretion on blood-pressure.

HEIDENHAIN next undertook to examine the parotidean saliva of the rabbit, in relation, on the one hand, to the chorda tympani, which was shown by RAHN to contain secretory branches for this gland, exciting the flow of what may be called cerebral saliva; and on the other to the

cervical sympathetic, which v. WITTICH and NAWROCKI have shown to lead to the secretion of so-called sympathetic saliva. The parotid of the rabbit is well adapted for experiments of this nature, since it contains a diastatic ferment that is absent in the secretion of this gland in the carnivora. He found that small quantities of pilocarpin injected subcutaneously produced the same effect as stimulation of the chorda tympani—gave, in fact, an abundant flow of cerebral saliva, probably by acting on the same mechanism in the gland. The cerebral or pilocarpin saliva contained only 1·02 to 2·05 per cent. of solids, whilst the sympathetic saliva contained no less than from 3·72 to 6·65 per cent., the greater part consisting of organic matter. The secretory fibres of this gland therefore run in the glossopharyngeal and chorda tympani nerves, whilst the trophic are contained in the sympathetic of the rabbit. The histological changes in glands that occur with variations in the activity of secretion seem to differ to a very remarkable extent. We have no space for the details of the experiments he gives.

Professor HEIDENHAIN advances the following view as the most satisfactory explanation of the facts he has observed. We must presuppose, he says, the presence of some substance in the cells having a strong affinity for water, and it is not unreasonable to assume that the protoplasm constitutes this substance. Water is first abstracted from the lymphatic spaces, and then secondarily from the interior of the blood-capillaries; and imbibition takes place into the protoplasm till a state of equipoise is attained, no change occurring as long as the gland is at rest, though the tension of the water in the protoplasm is considerable. The effect of excitation of the secretory nerves is to induce a change of the molecular arrangement in the limiting layer of the protoplasm on that side of the cell which is turned towards the lumen of the acinus, in consequence of which diminished resistance to the act of filtration occurs at this part. Water consequently escapes, the outflow being perhaps maintained or increased by contraction of the protoplasm, as KÜHNE has actually observed in the cells of the pancreas of the rabbit under the microscope. The tension of the water in the cells falls below the imbibition-power of the protoplasm, and a current sets in from the blood-capillaries, and the escape of water from the inner surface and the absorption through the outer surface of each cell continue as long as the protoplasm contracts under nerve influence. When the excitation ceases the protoplasm returns to its former condition, the current stops, and the gland returns to a state of rest. This view, it will be observed, does not make the excretion of water in any way dependent on the blood-pressure, whilst it explains why no more water leaves the capillaries than is required to make up what is withdrawn from the lymph-spaces, why, however long the excitation is applied, the lymph-spaces never become charged with excess of fluid, and why the excitation is neither accompanied nor followed by any increase of lymph in the efferent lymphatics.

The functions of the trophic nerves, he thinks, is to lead to the formation of soluble organic substances in the gland-cells, which are dissolved by the fluids eliminated under the influence of the secretory nerves. The organic constituents are not formed directly from the protoplasm, but during the period of rest, substances are formed which stand in close relation to the specific constituents of the gland. Thus, in the case of the pancreas, during rest, the zymogen of the trypsin is formed, from which the trypsin is afterwards developed; and thus in the mucus-glands, not the easily soluble mucin itself, but a substance that is easily convertible into mucin, is formed. It would otherwise be unintelligible why mucin does not appear in moderate quantity on slight irritation of the chorda, when the aqueous portion of the secretion is slowly percolating the cells. We thus obtain an explanation of the reason why the cells of quiescent mucous and serous glands are relatively poor in protoplasm, presenting a clear and but slightly granular aspect, whilst they are rich in the mother-substances of the proper products of the secretion. And hence, too, we learn why, after persistent activity, the glands are rich in protoplasm, as indicated by their marked cloudiness and granular aspect, whilst they contain but little of the material proper for the production of the organic constituents of the gland. In what mode the trophic nerves effect the conversion or aid in the elimination of the organic substances of the gland Professor HEIDENHAIN does not attempt to explain.

NOISES by day are bad enough, but noises by night are worse in their nature and effects on the human organism. They prevent or disturb sleep, and they distress the nervous system, making it morbidly sensitive. It is easy to see how this must be. When the period for repose arrives the brain and the organs of special sense are weary, and need rest; not merely for the sake of relief from labour (as every part of the body requires a respite from exertion), but to give time for recovery from the debilitating effect of fatigue—a matter of even more serious moment to the nerve-centres than the extinguishment of the sense of weariness, which may be produced by drugs, whereas recuperation of energy can only be accomplished by orderly nutrition, and to the performance of this function rhythmical periods of rest are indispensable.

The central nervous system is provided with a wondrous faculty of isolation, and can, so to say, close the avenues of approach against external impressions in a manner strange and seemingly inexplicable. For example, in individuals so placed that the organs of special sense can seldom take rest together, one sense will be left on duty as a sentinel while the others sleep, and, which is still more noteworthy, the sense on the alert may be keenly sensitive to a particular kind of impression, while to others it is as dull as perfect slumber can make it. The telegraph clerk on solitary duty at an out station will sleep on insensible to, and there is reason to believe unconscious of, any noise except that produced by the vibration of his instrument, which instantly arouses him. In the same way persons accustomed to be awakened by the touch will sleep through any noise, and are often insensible to movements except of the particular kind they are expecting. The complement of this phenomenon in its divers manifestations is the curious manner, to use a popular phrase, in which "habit is second to nature," and accustomed sensations, whether of noise, or sight, or feeling, become necessary to repose. Some of these sensations operate on the mind-organ in a way that needs no

explanation. It is, for instance, perfectly easy to understand why the captain of a ship may be unable to sleep unless he hears the officer of the watch pacing up and down the deck over his head. The measured tramp is the guarantee of safety, and the moral sense of security would be replaced by a feeling of personal responsibility the moment the tramp ceased. Mental uneasiness would be excited, if not alarm, sufficient to wake the brain when the footsteps were no longer heard. The mind often yields itself to sleep on conditions, and a pledge is taken for the fulfilment of the contract. The timid child or sick person impressed with a fear of loneliness will sleep on condition that the nurse watches by the bedside. The pledge taken is sometimes the grasp of a hand, sometimes a shadow falling on the curtain, now and then the slight pressure of an elbow resting on the pillow. Sleep supervenes, and it is so profound that ordinary noises will not disturb; but when the token is withdrawn, the sleeper awakes, although the continued presence of the watcher might, had the senses been in full action, have been detected by indications more distinct than the particular pledge given. What we call "habit" acting in this way is sometimes so strong that sensations disagreeable to others may become necessary to the repose of those who are accustomed to them. One person can sleep in noise, and not in quiet; another requires a particular degree of light, another the feeling of contact with a certain kind of material, or a bed made in a special way, to ensure perfect repose.

The majority of sleepers desire the nearest approximation to absolute quiet as the condition of healthy rest-taking. It would be well if this demand could be satisfied, and, looking to the interest which the community has in the mental integrity of its members, such measures as may be possible should be taken to prevent the needless noises which disturb the period of rest. Unfortunately this obligation is not recognised, and some of the most hideous annoyances are specially reserved for the hours when, other sounds being stilled, they are heard in their greatest intensity. What, for instance, can be more distressing than the heavy thundering of a traction engine along the road under a bedroom window, or the monotonous rumble of a heavy roller, or the lumbering rattle of laden waggons on their way to a railway station or market? These noises are, we know, many of them, unavoidable; and the obvious answer to complaints of suffering from such causes is that the sensitive ought not to take up their abode in houses abutting on public thoroughfares. This view of the case may be reasonable, but it is not satisfactory; nor can it be allowed to close the controversy with guardians of the peace of neighbourhoods which are seriously and unnecessarily disturbed. The matter is not only one of interest, but of considerable importance. As the law now stands, there is utter disregard for the well-being and comfort of the public. Any householder may with impunity gratify his morbid or eccentric propensities by keeping howling dogs, crowing cocks, or other noisy animals, under his neighbour's window; the horse-breaker may convert the adjacent square into a *corso* or training-ring for the most refractory of iron-shod steeds; the scavenger may brush and scrape and vociferate to his heart's content; drunken men and women may fight and scream. It is at night these disturbances occur, and *therefore* the authorities forbear to make special regulations, and the police—called guardians of the "peace" by way of pleasantry"—are lenient, in a word, indifferent.

It would be difficult to overstate the suffering entailed on the sick and the nervously excitable by noises at night. It is impossible to procure immunity from disturbance during the hours devoted to business and pleasure, but it is scarcely too much to expect a cessation of annoyance when the time comes round which is by common consent set apart for rest. The Legislature would confer a boon on the community, and particularly on the large class of sufferers from brain irritability, if a short Act could be passed enjoining the preservation of quiet, and making it a misdemeanour to keep noisy animals, or practise disturbing occupations, or to brawl in the streets, between midnight and six o'clock in the morning. It should also be permissible to impose the same restrictions on drivers of heavy and noisy vehicles at night which are enjoined for the quiet of churches in populous districts on Sundays. We have not dealt with this subject without abundant motive for remonstrance. The misery caused and the injury inflicted among the sick and weakly by the present systematic neglect of the smallest precautions to prevent noises at night, and to protect the health of ordinary sleepers, are thrust on the notice of medical practitioners with a force of argument it is impossible to resist. The evil is one of great and increasing magnitude, and it is too serious to be superciliously overlooked.

Annotations.

"Ne quid nimis."

THE CASE OF DODWELL.

THE reply of the Secretary of State for Home Affairs to Mr. Burt disposes, as we assumed it would, of the absurd statement that Dodwell is retained in custody pending the provision of monetary guarantees for his good conduct. The assertion violated every consideration of common sense, and was altogether incredible. At the same time we cannot regard the situation as described by Mr. Cross as satisfactory. It would, as the right hon. gentleman very properly observed, be irregular to communicate the official reports to the medical officers in charge of criminal lunatics. The reports of these gentlemen will not furnish what we desire to possess. It is not the course of lunacy practice to regard or accept the "opinion" of medical superintendents of asylums as the legal ground for incarceration. In the case of a private asylum such a report would be deemed liable to be prejudiced, and we fail to see how the opinion of a public officer similarly situated can be so generally acceptable as any judgment which is to repair the grevious first fault of this deplorable case in public or professional estimation ought to be. The Secretary of State is right in withholding these officers' reports. No one, so far as we are aware, evidently desires to see them. Meanwhile there is not only a wish, but a great anxiety, to have the report of an independent commission on the question why Dodwell was judged insane, and nothing less will appease the anxiety which, so far from being allayed, is daily increasing. The question at issue is not whether this man ought to be retained, but whether there exists, or ever existed, any sufficient ground for his confinement as a lunatic. Upon this point the public is wholly in the dark; not the slightest importance attaches to the finding of the lay jury without medical evidence. That is quite as likely to have been fallacious as just. The demand of public opinion is for an independent judgment by

some qualified judges on the issue whether or not Dodwell is insane. For this we wait, and it must still be hoped that the concession to common sense will not be much longer delayed. At present the prisoner is unreasonably and, as we believe, illegally, dealt with.

THE BRITISH MEDICAL ASSOCIATION.

THE forty-sixth annual meeting of the British Medical Association will take place next week at Bath, the President-elect being Dr. Falconer of that city. The recent lamented death, after a brief illness of a few days, of the President, Dr. Eason Wilkinson, of Manchester, will cast a gloom over the proceedings which it will be difficult to dispel. The first general meeting will be held at 8 P.M. on the 6th, when the President will deliver his address, and the annual report of the Council be received. On the 7th, an Address in Medicine will be given by Dr. H. F. A. Goodridge, of Bath, and the sectional meetings will commence their sessions. Dr. McKendrick, the President of the Physiological section, will take for his opening address the subject of Physiological Acoustics, with demonstrations. A special discussion upon the differential diagnosis and treatment of the modes of intestinal obstruction will be opened in the medical section by Mr. Jonathan Hutchinson. The address in Surgery is to be given by Mr. Wheelhouse, of Leeds, and that on Forensic Medicine by Dr. Douglas Maclagan, of Edinburgh. The most important business, affecting as it does the constitution of the Association, will be transacted at the third general meeting, on Thursday, the 8th, when an alteration in the articles will be proposed, with a view to prevent female practitioners from becoming members of the Association. The usual festivities, to be held during the week, include a *soirée* at the Assembly Rooms by the Mayor and citizens of Bath on the 7th; a public dinner on the 8th; a garden party on the 9th, by the Mayor, as well as a *conversazione* and concert at the Colston Hall, Bristol, by invitation of the Bristol members of the Bath and Bristol Branch of the Association.

THE BONES IN PERNICIOUS ANÆMIA.

PROFESSOR OSLER, of Montreal, who has previously recorded changes in the medulla of bone in pernicious anæmia, has lately described a very instructive alteration found in one instance of that disease. The case was that of a girl twenty years of age, who presented only tenderness of the sternum to draw attention to the osseous system. The blood contained many microcytes and large irregular coloured cells, without nuclei, but none of the "elementary granules" of Schultze. Special attention is drawn to this, since it is the fifth case in which Osler has failed to find them, although they are abundant in ordinary anæmia and other cachectic conditions. There was moderate fatty degeneration of the heart, liver, and kidneys, but no other morbid state to be discovered. The medulla of the right femur, the sternum, and the ribs was of jelly-like consistence, not fatty, of a dark-red colour, like the splenic pulp. Microscopic examination showed (1) the ordinary granular marrow-cells, with distinct nuclei; (2) smaller marrow-cells, with granular protoplasm; (3) colourless cells of the size of the ordinary marrow-cells and larger, with homogeneous substance and finely granular nuclei. These are not vacuolated marrow-cells; their protoplasm is clear, transparent, like the ectosarca of an amœba. The nuclei are large, often indistinct, and their margins are granular and ill-defined. (4) Nucleated red blood-corpuscles, some so pale that their tint could only be recognised on comparing them with colourless cells. Their protoplasm had a uniform darkly granular appearance, and showed the elasticity so peculiar to the red corpuscles. The nuclei were large, often two or three in each cell, and some had the "dumb-bell" shape, manifestly in the act of division. Other cells were deeply coloured, and were evidently the so-called "transitional forms" of corpuscles. Most were large in size, their nuclei granular, eccentric, but rarely projecting from the body of the cell. In some the nuclei contained a few indistinct granules, and in two, which were deeply coloured, no nuclei could be seen. Some of the deeply-coloured corpuscles were smaller, round or elliptical, with vesicular nuclei. These cells resembled closely many of the larger red blood-corpuscles, but it was difficult, often impossible, to say whether or not they possessed nuclei. Lastly, ordinary red corpuscles were present, many large, elliptical or irregular in form, but always flattened, and of moderately dark colour. Some microcytes were seen, but fewer than in the blood or spleen. No giant cells were seen, nor any of the so-called "Charcot's crystals," even when decomposition was commencing.

In no other examination of the marrow, in either morbid or healthy conditions, has Osler encountered such a variety of developmental forms. In two other cases of pernicious anæmia, in two of leucocythæmia, in one of pseudo-leukæmia, in two of tuberculous affections—phthisis and tubercular peritonitis,—the marrow was hyperplastic, and presented few or many nucleated red corpuscles, but not the peculiar forms described above as (3) and (4). These appear to be intermediate between marrow-cells and nucleated red cells on the one hand, and ordinary red blood-corpuscles on the other. Osler quotes Neumann's significant statement that "to regard the nucleated red blood-cells as transitional forms between colourless and coloured elements involves a theory as to their origin on which I, perhaps, have expressed myself with too much assurance"; and again, "It is not improbable that the development of the nucleated red corpuscles may be independent of the colourless marrow-cells"—a significant admission, considering his former positive statement on this point. The case now recorded supports, however, the opinion that a transformation of the colourless marrow-cells into red corpuscles actually takes place, and that this is produced by a degeneration of the nuclei, and thickening of the protoplasm of the cell. This seems to be the significance of the series of intermediate forms above described. Still, it is by no means obvious what significance these changes have as to the disease in which they have been found. Whatever the change in the medulla, the origin and cause of the disease can only be decided by further observations on the functions of the marrow and its influence on the blood.

"HOT-WEATHER DANGERS."

IT is always a speculative enterprise to comment on topics of the weather even a day or two in advance, and when these lines reach our readers it is quite possible they may be more keenly interested in the perils of cold than of heat. Nevertheless the experience of the last few weeks not only justifies but suggests an urgent remonstrance against the oversight of inattention to the matter of suitable clothing. Although the changes of temperature are very considerable, and would render it inexpedient to incur any great risks of exposure, there can be no question that more mischief is to be feared from excess than deficiency of wrapping. The point to which attention requires to be prominently directed is the need of protecting the body, and especially the head, from the direct rays of the sun. By a strange freak of fashion cricket is played at the season least well suited for the pastime, and by recent untoward occurrences it has been again demonstrated that those who expose themselves without sufficient head-covering dare the gravest of dangers. It is not alone the external heat that does harm; the violent exertion produces a considerable evolution of heat within the organism, which cannot be readily dissipated, owing to the temperature of the surrounding atmosphere,

and sets up disturbance, easily converted into disease. Much may be done to minimise the peril by the adoption of clothing calculated, as regards material, colour, and make, to favour rapid evaporation. Every article of dress worn at this season, whether in the cricket-field or elsewhere, should be loose, constricting bands of all kinds being avoided. Pressure of any description by tightly-fitting articles of clothing should be prevented. The circulation must be unimpeded, the body spared every ounce weight of trappings that can be dispensed with, and while adequate protection is afforded against the heat without, that generated within must be allowed to pass off unrestrictedly in order that the natural temperature of the body in health may be preserved. There are many maxims of prudence in relation to the defence of the body from perils of heat which need to be borne in mind, and they have been repeatedly expounded, but the most imperious requirement at the moment seems to be greater attention to the matter of clothing, which this year, more than in former seasons, is apparently disregarded.

ACUTE ASCENDING PARALYSIS.

M. DEGERINE has announced to the Académie des Sciences the observation of changes in the anterior roots of the spinal nerves in cases in which a careful naked-eye and microscopic examination revealed no lesion of the spinal cord. The method of examination employed was the hardening in osmic acid, and examination by means of picro-carmin. In each preparation a number of nerve-tubules presented the appearance of parenchymatous neuritis, fragmentation of the myelin in drops and droplets, an increase in the protoplasm of each interannular segment, and multiplication of the nuclei of the sheath. In some of the tubules so changed the axis-cylinder had entirely disappeared. Most of the nerve-tubules presented no appreciable alteration. The same appearances were observed in each part of the cord. A similar alteration of some of the nerve-tubules was found also in the intra-muscular nerves of the paralysed limbs. Attention is drawn to the point without much weight being laid upon it, and its relation to the disease may admit of some doubt when we consider how small a proportion the few degenerated tubules bear to the great amount of paralysis.

ALLEGED CURE OF TUBERCULAR MENINGITIS.

EVERY physician must now and then have met with cases in which a diagnosis of tubercular meningitis has been made, and yet, where recovery has resulted. When the case has so fortunate an issue, he doubts the correctness of his diagnosis in pinning his faith on the notion that true tubercular disease of the membranes of the brain must inevitably terminate in death. Such, however, is not the universal belief, if one may judge from a case recently recorded by M. Cuffer in *La France Médicale*, where it is claimed for iodide of potassium that it cured tubercular meningitis. The subject of this paper was a man thirty-four years of age, who was admitted into La Pitié, under the care of Professor Peter, on April 17th, 1877, with a history of having three days previously, whilst at work, been attacked with severe headache, which had been followed by obstinate constipation and retention of urine. He had never had a similar attack to this, and on admission the following group of symptoms was noted: intense frontal headache, with intolerance of light; pupils equal; strabismus; rigidity of muscles of neck; constipation, nausea, retention of urine, slowing of pulse (54), suspirious breathing, cramps in the limbs, and a well-marked *tâche meningitique*. He was continually groaning. The temperature was 98·6° F. These symptoms pointed to meningitis, and its nature was presumed to be tubercular by the detection of dulness, with jerking respiration at the apex of the left lung. This diagnosis arrived at by M. Peter, after exclusion of all other hypotheses as to the origin of the meningitis, appeared to be borne out by the progress of the case. The symptoms increased in intensity, delirium set in, and the patient's cries became more frequent and loud. The pulse fell to 50 beats per minute; the breathing was very harsh below the right clavicle, and emaciation rapidly set in and became very marked. On the 23rd the constipation continued, in spite of the administration of calomel; the prostration was extreme, the pulse small and thready, the pupils unequal, strabismus more marked. The patient was thought to be moribund. M. Peter then prescribed iodide of potassium in half-drachm doses. For three days there was but little change; then slight improvement set in, so that (still under the same treatment) in rather more than a fortnight the patient was able to get up. His appetite was good, and sleep undisturbed. The strabismus remained, and there was still some headache, but the graver symptoms had entirely subsided. The pulmonary signs, however, were rather more pronounced, some dry crepitant râles being detected below the right clavicle. He was considered to be cured of the meningitis by the 24th of May, but the same amount of the iodide was still continued daily. The case is given without comment, and it is only to be regretted that the details are so meagre. At any rate, as twelve months had elapsed before the time of the patient's discharge from the hospital and the publication of the case, it would have added much to its interest had the author appended some statement of the man's condition in the interval. It may be added that the idea of syphilis was suggested, only to be set aside; for, although the patient had contracted a chancre some years before, he had never exhibited any manifestations of the disease. The published record, however, is so incomplete that it can hardly be held to justify the inferences drawn from it, and we have quoted it here as a warning against too hasty deductions in therapeutics based upon the insecure data of a doubtful diagnosis. Fully admitting the good effect of the drug in producing the amelioration of the symptoms, it requires more evidence than is here given to admit also that the meningitis was "tubercular."

SANITARY MATTERS AT SHEFFIELD.

A MEDICAL meeting, attended by most of the practitioners of Sheffield, was held at the Medical School, Surrey-street, on the 26th ultimo, to discuss the circumstances under which the urban sanitary authority has advertised for a medical officer of health, reducing the salary offered from £600 to £300. Dr. De Bartolomé occupied the chair, and the meeting was addressed by Mr. Favell, Dr. Law, Mr. A. Jackson, Mr. J. Barker, Dr. Keeling, Dr. Young, and Mr. Browning. The import of the resolutions indicated support to Dr. Griffiths, and a condemnation of the parsimonious policy of the Corporation in reducing the salary, and expecting at the same time to secure the services of an efficient officer. Meanwhile, as we have already shown, it was remarked in effect that Dr. Griffiths had failed, not in doing too little or doing it badly, but in endeavouring to do too much, and in offering to perform a kind of work not in accord with the position of a medical officer of health. There can be no possible doubt, as was plainly pointed out at the meeting, that a town of this size should monopolise the time and energy of a medical officer, and that he must of course be paid accordingly. Liverpool has always, in this respect, been in the van of reform, and the sanitary authorities of that town have always treated their officers fairly, and even generously. But the line of action adopted by the Sheffield authority is almost beneath contempt. The Committee bring, but fail to prove, a series of petty charges against an officer who has, according to statistical

results, done his work excellently well, and follow up this proceeding by cheapening the office. Whether the Corporation will receive the assent of the Local Government Board to carry out the course they now propose, unless on its own responsibility, remains to be seen.

The course which has been taken by the medical profession in Sheffield in this case deserves warm commendation, and we hope that it may become an example to the profession in other districts where medical officers of health have been placed at disadvantage by the local authorities. As Dr. De Bartolomé admirably said at the opening of the meeting, they came together not only as medical men, to express an opinion on the professional aspects of the question under consideration, but as ratepayers exercising their right of discussing the action of the local authority.

REGISTRATION OF BIRTHS AND DEATHS IN NEW JERSEY.

ON the 1st June of the present year a new law as to the registration of births, deaths, and marriages came into operation in New Jersey. To facilitate the introduction and working of the new law, the State Board of Health has issued a series of instructions to ministers, physicians, and others, from which we gather that if the State of New Jersey has been somewhat slow in taking peremptory steps to secure trustworthy vital statistics of its population, having once taken the subject fairly in hand, it has not been hampered with some of the doubts which have possessed the medical profession here with regard to the part which the physician should play in the scheme of registration. Thus, as to *births*, the law provides (note the phraseology) that "it is made the *privilege* of any person present at the birth of a child to report the same to the proper authority," but "the *physician* or *midwife* is *held accountable* [the words here italicised are italicised in the instructions] in case of failure." In other words, the physician is required to register the births he is cognisant of professionally, including still-births. In the event of the information of a birth being sent to the proper authority by post, it must be posted in presence of a witness. As to deaths, it is enacted that "in case of any person dying within this State, it shall be the duty of the physician who may have attended him during his last illness, or, in case there has been no physician in attendance, of the coroner or county physician, after view or examination had, to furnish, on the application of the undertaker or any member of the family, a certificate of the death of the said person, which certificate shall show the name, age, sex, colour, nativity, occupation, last place of residence, precise place of death, and the cause of death," under penalty of ten dollars for neglect. Here, in the first instance, the principle of our own Registration Act is followed, and the suggestions to medical practitioners for filling up the certificate of death, given in the instructions, are condensed from the suggestions of the Registrar-General of England.

THE SEAMEN'S HOSPITAL.

WE have received the third annual medical report of this institution, which has accommodation for 243 patients. The statistical tables show that during the past year 2077 cases were admitted, that 179 was the average daily number in the hospital, and that 3287 out-patients were treated. Mr. W. Johnson Smith, F.R.C.S., the author of the report, comments on some interesting particulars in connexion with scurvy, enteric fever, dysentery, phthisis, and pyæmia. The scurvy statistics show that carelessness, which must sometimes approach to cruelty, still exists on board British ships, and, as the writer indicates, when supplemented by alcoholism and pre-existing disease, results in perpetuating the disease among the sailors of the mercantile marine. We are reminded that no Parliamentary return relating to scurvy has been published since 1876, and it is desirable that some such document should soon be asked for, in continuation of several Blue-books on this subject presented to both Houses since the Merchant Shipping Act of 1867 came into operation. The comments on enteric fever show that the average annual mortality from this malady during the last five years has been about 11 per cent., six out of fifty-six cases admitted in 1877 having ended fatally. Mr. Smith, in endeavouring to trace out the sources of this disease, records an opinion that many unhealthy conditions obtaining in Scandinavian ports favour the frequent occurrence of enteric fever in Swedish and Norwegian vessels, especially in the matter of drinking water. This is a subject that should receive special attention from port medical officers both in the metropolis and the out-ports. Phthisis, as usual, figures prominently in the mortality list, and the writer quotes Dr. A. C. Hamlin, of the United States Marine Hospital Service, who considers the prevalence of this disease among sailors to be due to "constant dampness, foul air, great variations of heat and cold in the sleeping quarters, and improper food." The report before us records, moreover, a remarkable fact—viz., that among English and American sailors, as well as among foreigners who serve in British ships, the proportion of cases of this disease is very low—in the case of British subjects only 3·2 per cent. But among sailors "from France and the south of Europe, who seldom serve but in vessels belonging to their own ports, the proportion is very high; with the Greeks and Spaniards, for instance, being 11·7 per cent."

The antiseptic treatment of wounds has been practised here systematically for some time. Mr. Smith concludes his report by stating that "in not a single instance were any symptoms of pyæmia, or even of severe traumatic fever, observed in association with wounds made and treated under conditions supposed to be antiseptic."

THE ANNUAL "OUTING."

THAT the change of scene and air secured by an annual "outing" is beneficial to health cannot be doubted. The relief afforded counts for much, the opening up of new sources of energy counts for more, in the sum of advantages gained. Meanwhile, not only will the profit be small, but the result questionable, unless the relief and the sense of freshness are shared by mind and body alike. In a word, perfect absence of *worry* is essential to the full enjoyment and restorative action of the holiday. This is just what the majority of persons, particularly the heads of families, forget, for themselves and those around them. A jaded mind needs rest quite as much as a weary body, and neither the one nor the other can obtain the sort of rest which is essential to a complete renewal of strength without the awakening of new interests. The simple cessation of work may in some few instances give relief, but much more than this is necessary for the recovery of health and renewal of energy when mind and body are exhausted by long-continued or monotonous toil, or domestic duty. It follows that in the choice of a locality, and in the manner of conducting the trip, the inclination should be consulted not less than general convenience. It is too much the practice to make a toil of a pleasure, and create occasions of annoyance in the course of the annual holiday. Everything should be planned to leave the mind free as regards the obligations of home duty, and enable it to share the advantages of the change bestowed on the body. There is plenty of thought for the physical part of man's nature; it may not be unreasonable to put in a plea for the consideration of his needs as a being endowed with a mental part, which is apt to be overmuch burdened with responsibility and harassed by many cares. The annual outing will be incomparably more

enjoyable, and productive of lasting benefit, if these needs of the mind are considered, instead of being systematically overlooked. People go away anxious, and return to mourn over the smallness of the benefit they have received. They took their worries with them, and might almost as well have stayed at home.

A NEW PARASITIC DISEASE OF THE HAIR.

UNDER the name of "Piedra," a parasitic disease of the hair, supposed to be a previously-known affection, has been described to the Académie des Sciences by M. Desenie. It has been met with in Columbia, in the natives of the province of Cauca. It consists in small nodosities, visible to the naked eye, and as hard as stone, resisting and even turning the edge of a scalpel. The hair, treated with ether and mounted in glycerine, presents the following appearance under a magnifying power of 140 diameters. The nodules are placed at a tolerably regular distance apart, without being arranged with any mathematical exactness. They are of two kinds, some surrounding the hair completely, like a fusiform ring, others surrounding it incompletely, or forming nodules on one side. This difference may be explained by a different degree of maturity of the fungus constituting them. Under a higher magnifying power they are seen to consist of a cellular mass of polygonal elements ·012 to ·015 millimetre in diameter, and regularly arranged, their intervals being indicated only by a black line. These cells have strongly refracting centres, but no nuclei. Adjacent to one of these nodosities a network could be seen consisting of little rods articulated one to another, and extending around the hair, just as ivy surrounds a column. Some of these rods appeared to blend with the proper substance of the nodosity, others terminated at some distance, either by an ampulliform swelling or umbellate extremity. Are these rods the mycelium of the fungus which forms the cellular mass of the nodule, or are they independent of the latter? The question is difficult to answer, since enough hairs could not be obtained to settle it by experiment; but it was evident the rods were merely in juxtaposition at the periphery of the hair. Nowhere in the substance of the hair could any trace of a vegetable parasite be discovered after the action of liquor potassæ or acetic acid, and the integrity of the medullary canal and its environment was evident on a transverse section through one of the nodules. The interior of the nodules was composed of a cellular stroma similar to that covering the periphery, and on it were some large cavities containing one or two large uncoloured cells, possibly three. Similar empty cavities could be seen at certain points in the substance of the nodosity, and had apparently been of the same nature, and become enclosed by the layer of polygonal cells.

THE SANITARY STATE OF RURAL DISTRICTS.

DR. AIRY, one of the Medical Inspectors of the Local Government Board, has recently reported on the results of an official inquiry made by him into the sanitary state and administration of Newhall, Church Gresley, and Swadlincote, in the Burton-on-Trent registration district. The inquiry was directed to be made in consequence of some prevalence of diphtheria and scarlet fever in the above-named localities, and it has disclosed a state of things most discreditable to the sanitary authorities of the places, the holders of property there, and the ratepayers of Newhall. Dr. Airy says that the water-supply is very bad. Such wells as exist are near privies, but the majority of the people have to get their water for domestic use from a surface-drain about a quarter of a mile from the village. This drain runs along the side of a piece of pasture land, where it is accessible to cattle, and is trodden and befouled by them. It is known as Batche's Hole. The drain is open to pollution also from house-slops and from a privy. Such other sources of water as are accessible to the population are equally open to defilement of several sorts, and of one of them it is said, "the children who go to fetch the water (from it) sometimes leave their dejections to poison what remains." Newhall has no proper drainage, and its privies are "ill-contrived and leaky reservoirs of excrement." Church Gresley is in a better position than Newhall as to drainage, the sanitary authority having recently spent several thousand pounds on drainage-works, but it does not appear to be in a better state as to its water-supply and privy accommodation. Swadlincote has a population of 2500, but while there is water running to waste in and near the village in sufficient quantity to supply every house, the inhabitants ar put to straits to obtain what is needed for domestic use. Indeed, the distance women have to go to fetch water i many cases makes them chary of using it. The arrangements for drainage and excrement disposal are of the most slovenly description, and in consequence are productive o abundant nuisance. It ought not to have needed centra interference to induce the sanitary authorities of these places earnestly to set to work to remove the evils described, especially as their medical officer of health must have made them quite familiar with their existence and harmfulness.

ANOTHER CIVILISED NUISANCE.

THE inhabitants of the city of New York are being subjected to yet another form of nuisance. Elevated railroads are now open from one end of the city to the other, which in many cases run close to, under, or above the counting-houses, warehouses, and offices of many of the chief establishments in the business quarter. Complaints are being continually made to the municipal authorities that the dirt and noise caused by these trains (which run about every three minutes during the working hours of the day) interfere very seriously with office work, and will speedily cause much depreciation of property in consequence. The evil is so pronounced that a petition setting forth the risks to health, mental vigour, &c., has been signed and presented to the authorities by nearly all the leading physicians in the city. These elevated railroads run immediately above the chief tram-car lines, and in consequence of their superior speed threaten to injure the tramway traffic very considerably.

FATAL URBAN SUMMER DIARRHŒA.

DURING the week ending July 27th, no less than 991 deaths in the twenty large English towns dealt with in the Registrar-General's Weekly Return, were referred to diarrhœa; and it may be estimated, on the basis of the metropolitan returns, which are given in greater detail, that at least 743 of these fatal cases were of infants under one year of age. The annual death-rate from this disease was equal to 6·3 per 1000 persons living in London, and to 7·9 in the nineteen large provincial towns. The rate among these nineteen towns ranged from 1·8 and 2·1 per 1000 in Norwich and Plymouth, to 13·3 in Leicester, 13·9 in Leeds, and 19·7 in Hull. Diarrhœa fatality, which in the four preceding weeks had shown the largest excess in Leicester, was still higher last week in Leeds and Hull; compared with the returns in previous weeks it showed a marked increase last week in Leeds, Sheffield, and Hull. The fatal prevalence of this disease usually appears in the London returns a week or two earlier than in the returns for the provincial towns, although the total mortality during the summer is almost invariably higher in the provincial towns than in London. It is difficult to account for the sudden and marked increase in the diarrhœa fatality last week in the principal Yorkshire towns.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.

THIS Association held its annual meeting at the Royal College of Physicians, London, on the 26th ult., under the presidency of Dr. J. Crichton-Browne, whose address embraced a variety of subjects of special interest to the members, including the Report of the Lunacy Committee of the House of Commons, the spread of insanity, and a graceful reference to the late Sir James Coxe and Dr. Robert Gardiner Hill. Several changes were made in the officers of the Association. Dr. Rayner, of the Hanwell Asylum, was appointed hon. secretary in the place of Dr. Rhys Williams, recently promoted to the Lunacy Board. Dr. Maudsley having resigned the joint editorship of the "Journal of Mental Science" with Dr. Clouston, the latter gentleman, Dr. Hack Tuke, and Dr. Savage, were appointed editors. Dr. Lush, M.P., was unanimously chosen President for the ensuing year. Two papers were read at the meeting—namely, "A few Notes on Lunacy in France, suggested by a recent visit to French Asylums," by Dr. Hack Tuke, and "A Report of a case of Insanity in a Woman without uterus or ovaries," by Dr. Savage.

ENTERIC FEVER AT BLACKBURN.

AN epidemic of enteric fever at Blackburn is reported. The patients are treated mostly in their homes. Of six cases admitted to the workhouse hospital one is dead. Upwards of eighty cases since the outbreak in April have fallen to the care of the medical officer of the No. 2 Poor-law District (Mr. W. G. Cort). This gentleman informs us that six persons in a dwelling-house in Alma-court took the malady, the head of the family, the last to take the disease, having died; the characteristic rose-spots in this instance were exceedingly well-marked. Most of the cases have occurred in localities conspicuous for their insanitary condition. On the whole the epidemic, sufficiently heavy, is, we are glad to be informed, on the decline. The type, or quality, of the malady is mild, only two deaths being recorded. The urban and rural sanitary authorities have had the epidemic well in hand. The cause is mere matter of speculation. It is not supposed that it has any relation to the recent lock-out.

THE NIGHTINGALE HOME.

THE report of the Nightingale Home for Nurses has just reached us, and from it we gather that the objects for which the home was established are thoroughly attained. It appears that during the year 1877 there were seventy-four probationers under training. Of these twenty-seven completed their course of study and obtained situations, thirty-two remained under training at the end of the year, eight resigned, seven were discharged as unfit for the work, and one left without obtaining employment. The course of training to which women wishing to be nurses are subjected seems complete. Forty-five lectures were delivered to them by Dr. Bristowe, Mr. Croft, and Dr. Bernays, and we are glad to see that these gentlemen do not disdain to perform this very useful work.

"It may be remarked," says the Committee in its report, "that a considerable portion of those who enter fail from one cause and another, and particularly among the special or lady probationers. Candidates of this class are admitted for the purpose of qualifying themselves in the practice of hospital nursing, with a view to, and as an essential preparation for, superior situations in public hospitals and infirmaries; and their failure arises in many cases from the fact that they either do not realise the nature of the work, or are unwilling, on more mature consideration, to enter upon it as a profession, or do not possess sufficient practical or administrative capacity to do so. The usual antecedents of most of these candidates afford a very imperfect test of their qualifications, and render the task of selection a difficult one. There is undoubtedly a growing demand on the part of hospital managers for the service of gentlewomen trained as nurses for the superior appointments."

The above paragraph is to the credit of the Nightingale Home, and we judge from it, as well as from other passages in the report, that its managers are really trying to do their work honestly and efficiently, and to give the world at large some solid guarantee that a Nightingale nurse is one who has been selected with judgment and trained with care. We sometimes receive prospectuses of nursing homes, &c., which make us fear that there is quackery abroad even in this humblest branch of medicine, and that very often mere sentimentality and mock religion are used as a cloak for ignorance and incompetence.

ANATOMICAL RESEARCHES ON THE CAUSES OF STERILITY.

F. WINCKEL has investigated the generative organs of 150 sterile women dying at a sexually mature age, and finds that, apart from such causes as vaginismus, which could only be ascertained during life, the causes of sterility might be classified as follows: 1. Mechanical obstructions. 2. Chemically destructive influences. 3. Disturbances in the nutrition of the ovaries. In almost all instances two or all of these conditions were present together, as in atresia of the Fallopian tubes, there were firm adhesions of the ovaries; in myomata there was abnormal position, or disease of the mucous membrane, ovarian tumours, &c. He only admits stenosis of the os uteri to be a cause of sterility when follicular catarrh is present with accumulation of mucus in the cervix. It is only in these cases that Winckel forces a passage and applies a caustic to the membrane.

THE DEATH OF DR. EASON WILKINSON.

OUR Manchester correspondent writes:—"Dr. Eason Wilkinson, the respected President of the British Medical Association, died at his residence, Greenheys, Manchester, on Friday, July 26th. It is, within a few days, just a year since he presided with general satisfaction over the great and successful meeting at Manchester, and therefore on the eve of the next meeting at Bath, where there is good reason to believe his career would have been crowned by the offer of a baronetcy. Dr. Wilkinson, who was sixty-five years of age appeared to be in vigorous health a week before his death, but a cold which he caught deepened into pneumonia, which carried him off with startling rapidity. He had occupied the post of physician to the Manchester Royal Infirmary for thirty-four years, and, besides this, held the offices of consulting physician to the Ardwick and Ancoats Dispensary, and to the Deaf and Dumb Institute. All these institutions sent representatives to attend his funeral, which took place on Tuesday, July 30th.

"A vacancy thus occurs in the staff of the Infirmary for an assistant-physician, and it is expected that Dr. J. Ross will offer himself as a candidate for this post. Dr. Ross is well known to the profession by his scientific writings, notably by his works on the Graft Theory of Disease and on Protoplasm, and has of late filled with exceptional zeal and ability the post of pathologist to the Infirmary. His candidature would certainly meet with the most hearty support of every member of the Medical Board, who feel that the best interests of the hospital would be advanced by the election of so distinguished a man."

CHLOROMA.

AN example of the rare form of sarcoma which, from its tint, has been designated "chloroma," has been recorded by Huber in the *Archiv der Heilkunde*. It occurred in a girl, aged twenty-one years, the primary growth being in the mamma. Death occurred in consequence of the widespread

secondary development of the growths, seven months only after the appearance of the primary mammary tumour, which was extirpated. At the autopsy secondary growths were found in the periosteum of the orbit, the frontal and occipital bones, and in the other mamma. All the tumours presented, on section, a yellowish-green tint, here and there bluish-green, mottled by paler tracts. The enlarged bronchial glands, and the pus which came from the wound left after the extirpation of the mamma, had the same colour. The structure of the tumours was that of a round-celled sarcoma, through which passed tracts of a spindle-celled tissue. The tint was pale in thin sections, and was due to coloured granules or drops, which were regarded as neither albumen nor simple fat, but, it was conjectured from the reactions, consisted of a compound of a fatty acid with some organic or inorganic substance. The periosteal position of these growths is characteristic of the variety.

THE VITAL AND ECONOMIC STATISTICS OF GLASGOW.

IT would appear to be the duty of the City Chamberlain of Glasgow to prepare every year a report on the vital, social, and economic statistics of that city. The report for 1877, drawn up by the present chamberlain, Mr. Wm. West Watson, F.S.S., now lies before us, and from it may be obtained a comprehensive idea of the existing state and recent progress of the most populous city in the kingdom next to London. The estimated population of Glasgow in 1877 was 556,000. The births in that year within the city numbered 21,092, and the deaths 13,823. The number of dwelling-houses was 117,089, and the general rental exceeded three millions and a quarter sterling.

THE FOOD AND DRUGS ACT.

AN attempt is being made this session by Mr. Sclater Booth to render this Act really and usefully operative. The second clause is to be so amended that it shall read, "for selling to the prejudice of the purchaser any article of food or any drug which is not of the nature, substance, and quality of the article demanded by such purchaser." It is to be hoped that this change will work well, for many offenders now escape owing to the unsatisfactory wording of the section, it being at present very difficult to prove that the foreign matter introduced is really deleterious in the sense of being an adulteration.

TREATMENT OF WHOOPING-COUGH BY TINCTURE OF DROSERA.

A PAPER which appeared on June 25th, 1878, in the *Journal de Thérapeutique*, by Dr. Lamare, on the Treatment of Whooping-cough by the Tincture of Drosera, has excited considerable attention, and the effects obtained by various observers have been different. M. Créquy, in a child of three months rapidly effected a reduction in the number and violence of the fits of coughing, so that from the end of the fifth day they almost completely disappeared. The same result occurred in another child of three years, recovery being almost complete in about fifteen days. Mr. C. Paul, however, was less fortunate, the remedy appearing to be without action. The plant used is the Drosera rotundifolia. Its digestive properties are well known since Mr. Darwin's observations upon it, and further investigation would be serviceable.

CHOLERA.

SEVERAL of our contemporaries reported last week that cholera was epidemic at Voronej (or, according to Keith Johnstone, Woronesh), sixty persons having been attacked with the disease. This town is situated on the Don, some 300 miles south-east of Moscow. No authentic news of this outbreak has been reported from official sources. Cholera has also (according to news received by the last mail) assumed an epidemic form at Neemuch, in the North-west Provinces of India.

HARVEY TERCENTENARY MEMORIAL FUND.

A SUM of about £230 is still required in order to enable the committee to close the subscription-list. Amongst the recent donations is one of twenty guineas from twenty members of the Pharmaceutical Society of Great Britain, and another of five guineas from the Midland Branch of the British Medical Association. Contributions will still be thankfully received by either of the honorary treasurers or secretaries.

THE SECOND READING OF THE MEDICAL BILL.

THE second reading of the Medical Bill is down for Monday night. If the Government again fail to advance the measure, they should announce without delay the abandonment of the Bill.

BY an Imperial *iradé* his Majesty the Sultan has been pleased to confer the 4th Class of the Order of the Mejidié on the following gentlemen, who all served in Dr. Sarell's ambulance at Plevna, Orkannie, and Sofia during the late war:—Mr. McKellar, of St. Thomas's Hospital; Dr. Pinkerton, of Glasgow; Dr. Macpherson, of Glasgow; Dr. Rudduck, of London; Dr. Smith, of Dublin; Dr. Kirkpatrick, of Canada; Dr. King, of San Francisco; Mr. Goodridge, of St. Thomas's Hospital; Mr. Jennings, of St. George's Hospital; and Mr. Denton, of Leeds. Messrs. McKellar, Pinkerton, and Macpherson were sent out by Lord Blantyre, and at his expense. The other gentlemen had gone to Turkey under a contract with the Stafford House Committee, which was transferred, on their arrival in Constantinople, to the Red Crescent Society.

AT the late annual meeting of the Maine Medical Association (U.S.), a member read a paper on "The Eradication of Syphilis and Crime by the Extirpation in that Class [*sic*] of the Procreative Power." Some remarkable statistics were given of the loss of infant life caused by syphilis, and the writer contended that the disease should be rendered a legal impediment to marriage, that it should be a crime punishable with mutilation for a syphilitic person to cohabit, and that a syphilitic prostitute should be "spayed."

THE twenty-ninth annual session of the American Medical Association was held in Buffalo, New York, on the 4th June last and the three succeeding days. About 600 delegates and members were in attendance, and a large number of papers of considerable interest were presented for discussion, although no subject of paramount importance claimed the attention of the Association. The meeting was in every way highly successful.

THE sum of £500 has been presented to the University of Durham College of Medicine, Newcastle-on-Tyne, by Dr. J. C. Gibbs (who is consulting surgeon to the Infirmary Newcastle-upon-Tyne, and joint lecturer on Pathology with Dr. Byrom Bramwell in the University of Durham) for the purpose of founding an annual Scholarship in Pathology. The gift has been accepted by the College, and the scholarship is to be called the "Gibb Scholarship in Pathology."

THE camp of instruction for the Engineer Volunteer Service closed on Saturday, July 27th, at Upnor, near Chatham. During the first week the heat was very intense, and several cases of diarrhœa were necessarily reported. Two or three

cases of sunstroke were also treated in camp and in Fort Pitt, and during the same period two accidents occurred—viz., dislocation of the humerus in axilla, and fracture of the fibula during the progress of the earthworks on Chatham Lines. The medical officer in charge during the first week was Surgeon Baines, M.D., 1st Middlesex Engineer Volunteers, who during the second week, the force being divided for the purposes of attack and defence, shared with Surgeon Pigeon, 1st Gloucestershire Administrative Battalion Engineer Volunteers, the divided supervision of the two camps.

AFTER a considerable amount of discussion it has been decided by the Government that the island of Cyprus shall for the present be "administered" by the Foreign Office. This department, the War Office, and the Colonial Office were all, so to speak, competitors for the honour.

YELLOW FEVER is still rife in New Orleans, and twenty-five deaths have occurred since the outbreak, out of a total of fifty-nine cases recorded.

Correspondence.

"Audi alteram partem."

RECOVERY FROM A POISONOUS DOSE OF CHLORAL HYDRATE.

To the Editor of THE LANCET.

SIR,—As some attention has lately been directed to the "Extraordinary Tolerance of a Poisonous Dose (165 grs.) of Chloral Hydrate," by Dr. P. E. Bishop, in the *Boston Medical and Surgical Journal* for September, 1877, it may be useful to place on record the following case, in which recovery occurred after about 240 grains of the drug had been swallowed with the intention of committing suicide.

A widow, aged sixty-two years, after spending an apparently pleasant day with some friends last Christmas, returned home accompanied by her father, and went to bed soon after 11 P.M. On the following morning, as she did not come down to breakfast, a servant was sent to her room, who found her quite unconscious in bed. On a table by her bedside were two small bottles, nearly empty, which, from the statements made by the patient herself after recovery, and from other somewhat imperfect sources of information, had apparently contained about three ounces of the now well-known syrup of chloral hydrate (ten grains to one drachm), which had been bought at the shops of two highly respectable chemists, where the family were accustomed to deal. When first seen by myself, and subsequently by my friend, Mr. Meehan, the face of the patient was pale and somewhat livid, the lips having a bluish or leaden hue. The eyelids were closed, and on raising the upper lids with a finger the pupils were observed to be contracted to a small point, and insensible to light or to touch. The limbs were flaccid and powerless, and on attempting to change the position of the patient, her head had to be supported, as it dropped suddenly like that of a corpse. The skin felt soft, but not clammy, and the surface-temperature, so far as could be ascertained without a clinical thermometer, was decidedly lowered. The pulse was 58 per minute, small, weak, and easily compressible, the breath smelt strongly of chloral, and the respiration, which was slow and feeble, showed an alarming tendency to cease on attempting to move, in any way, the patient. As there appeared immediate risk of a cessation of organic function, it was decided, after a not altogether satisfactory attempt to use the stomach-pump, to apply the induced current of galvanism, which was directed from the nape of the neck to the præcordial region; and this had the effect, after having been perseveringly continued at intervals for nearly two hours, of increasing the force of the heart's action, and of quickening and strengthening the pulsation. Later on, during the period of unconsciousness, it became necessary to have recourse, from time to time, to the galvanism; and the result of its application, as regards the circulation, was decidedly beneficial. Throughout the progress of the case there was no vomiting and no hiccough. The pulse, even during the period of its feeblest action, did not become intermittent, and there was no profuse perspiration. Assuming that the patient, as she subsequently acknowledged was true, had swallowed the chloral within an hour after going to bed, the condition of profound unconsciousness, from which it was impossible by any means to rouse her, continued for about thirty-five or thirty-six hours. During the succeeding twelve hours she could with difficulty be roused, and it became possible to give her a few spoonfuls of milk, which were instinctively swallowed, but not apparently without great risk. As consciousness became more fully restored, the patient began to complain of severe and continued pains in the lower part of her body, especially in the gluteal region and the legs. These pains appear to have troubled her for some days; but the subsequent recovery, though slow, did not, in other respects, present any symptoms requiring special notice.

With reference to the state of the patient's mind in this case, it was subsequently ascertained that about eighteen years previously she had been under restraint for some time during the climacteric change, and that about three weeks before taking the chloral she had attempted suicide with laudanum, and, for the purpose of diverting attention from the act, had cunningly filled up the bottle on that occasion with ink. After this failure to commit suicide with laudanum, she decided to try chloral, and availed herself of the first opportunity she had, which was on Christmas Eve, to purchase, as she thought, a more than sufficient quantity for the purpose. When she had recovered from the effects of the chloral, she openly spoke of her intention to kill herself as soon as she could; and as there was evidently unsoundness of mind, she was removed to a lunatic asylum, where she remained for about two months. Soon after leaving the asylum, and whilst on a visit to some friends in the country, she deliberately walked into a pond in the private grounds, and was drowned. The suicidal monomania in the patient under notice was very strongly marked, and it is the only point of interest to which I would wish to direct attention; for the tolerance of an excessive dose of chloral hydrate in the case recorded by Dr. Bishop was associated with similar unsoundness of mind, and, like the corresponding tolerance of excessive doses of digitalis in cases of alcoholic delirium, it suggests that the mental condition of the patient on these occasions is, to a great extent, antagonistic to the usually poisonous influence of the drug. Both susceptibility to and immunity from certain poisons differ greatly in the lower animals, in consequence of congenital peculiarities in their organisation; and it would appear probable that in the human subject corresponding peculiarities may be at least temporarily acquired through the abnormal and exaggerated influence of the mind over the functions of organic life.

I am, Sir, yours &c.,

WILLIAM SEDGWICK.

Park-place, Upper Baker-street, July 29th, 1878.

ON THE USE OF CARBOLIC ACID IN SMALL-POX.

To the Editor of THE LANCET.

SIR,—In an interesting and suggestive paper by Dr. Eade, published in THE LANCET, June 29th, 1878, the following passage occurs:—"Not long ago it was stated that the development of the vaccine vesicle could be prevented by the application of carbolic acid. If this is so, it would seem highly probable that the same kind of destructive influence would be exerted upon the small-pox eruption, if the acid were applied to the pustules before or during the process of their maturation. The process of introducing a little of the strong acid solution into the apex of each pimple would be tedious and disagreeable, but if effective, it might not only save much disfigurement, but possibly even life itself."

Having adopted this plan for more than ten years, I am enabled to say that Dr. Eade's supposition is quite correct. The first case in which I used it was that of a young lady with severe confluent small-pox. The method of applica-

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tion, however, differed from that suggested by Dr. Eade. The entire surface of the face, neck, hands, and arms was painted over with the strong acid, not all at the same time, but a fresh portion at each visit. A few seconds after the acid was applied, a piece of blotting-paper was laid on to absorb the excess of acid, after which wet lint was applied, which speedily relieved the smarting sensation caused by the acid. The result of this treatment began on the first appearance of the eruption—viz., that the skin became dry and parchment-like, without any trace of pustulation, while the rest of the body was covered with pustules. It was found that the dryness of the skin where the acid had been applied caused some degree of discomfort, but this was relieved by anointing it with salad oil. After desquamation, there was no trace of mark, and far less than the usual degree of redness. I did not venture to paint more than the exposed parts of the body, fearing ill effects from a too large absorption of the acid. As it was, there appeared for some days the usual effect of the absorption of the acid—viz., a deep discolouration of the urine, but I feel sure that the febrile disturbance was considerably less than it would have been had the acid not been used.

How far a more extensive painting of the surface would be safe I am unable to say, as the rarity of the epidemic here has afforded me but few cases of a severe nature for the adoption of this treatment. I incline to think, if due care were taken to remove the excess of acid by the immediate use of an alkali and subsequent washing with warm water, and if a not very large patch were painted at one time, that there would be little risk in dealing with almost the entire surface of the body.

I have sometimes felt disposed to try the application of strong nitric acid, painted on rapidly and instantly neutralised by alkaline solution. It would not be painful, unless the skin were broken, and would, I think, undoubtedly have the same result as carbolic acid, without the risk from absorption.

So far as regards disfiguration from small-pox, I am sure that we have in carbolic acid the surest preventive of pitting. I think with Dr. Eade that it also affords a means of diminishing febrile action, and if it is found that the entire body can be subjected to treatment in this way, that it will be also a means of largely diminishing the mortality from small-pox.

Your obedient servant,

Lynn, July 16th, 1878. JOHN LOWE, M.D.

MEDICAL PRACTICE IN SOUTH AFRICA.

To the Editor of THE LANCET.

SIR,—It may be interesting to some of your correspondents who contemplate practising in South Africa to know that there are almost always a number of district surgeoncies vacant in that colony. The pay of a district surgeon is £75 a year, and, with allowances and extras, generally amounts to about £100 per annum. If the candidate for practice can select a district surgeoncy in a part of the country where there is fair scope for private practice, he is rather fortunate, as there are some of these appointments in districts where there is little or no private practice, and consequently the appointment, *per se*, is useless. In the colony there is also a custom of guaranteeing a medical man a given sum—say £500 a year, so that financial failure is obviated. Midwifery fees are better than in this country, generally ranging from £3 to £5, and visiting fees are paid at the rate of £1 per hour one way, the physician being presumed to travel at the rate of six miles an hour—*e. g.*, if a patient resided eighteen miles distant the fee for visiting him would be £3.

I now speak of up-country practice, as the towns generally are well supplied with medical men. In the up-country districts generally the roads are very bad, being mere tracks, rarely or never repaired, and travelling is laborious and disagreeable. The journeys are often very long; the writer has been sent for to visit a patient thirty-six miles off, seven miles of this distance being along the dried-up bed of a river. The country in many parts is desert-like, and the mode of life is necessarily of a somewhat primitive character. The population is widely scattered. Nevertheless, many medical men make good incomes, and accumulate money. I am of opinion that the cost of living and drugs is about 25 per cent. more than in England. The climate generally is good, being well adapted for pulmonary complaints, as it is warm and very dry, without being enervating.

I am, Sir, yours, &c.,

29th July, 1878. J. G. THORNLEY, M.D.

PARLIAMENTARY PROCEEDINGS.

HOUSE OF LORDS.

Friday, July 26th.

IDIOTS, ETC. (IRELAND) BILL.

Lord CARLINGFORD moved the second reading of this Bill, which had come up from the Commons, and in doing so said that its object was to enable Boards of Guardians in Ireland, with the consent of the Irish Local Government Board, to send pauper idiots to places in which they could be better cared for than they could be in the workhouses.

The Duke of RICHMOND and GORDON said he did not oppose the second reading, but in committee he would move an amendment to remove any difficulty in the power of the Irish Local Government Board to give effect to the recommendations of a committee which had inquired into the subject.

The Bill was read a second time.

HOUSE OF COMMONS.

Thursday, July 25th.

SMALL-POX.

In answer to Dr. Cameron,

Mr. SCLATER-BOOTH said he had caused inquiry to be made as to a statement that a man named Carter, since dead of small-pox, was allowed while prostrated by that disease to lie during ten hours in the public road near Hadham-cross. The man applied for medical relief, but the surgeon did not think it was in any sense a serious case, or that the man was suffering from small-pox. On the following day the man was making his way to the workhouse, when he succumbed. The union officers provided suitable covering for him, and supplied him with tea and brandy, before removing him to the workhouse. He was not removed at once because of the danger of infection. It was true that certain children congregated round the patient as he lay in the road, but he had no information as to who they were or where they came from.

Monday, July 29th.

VACCINATION PROSECUTIONS.

Mr. GOURLEY asked the Secretary of State for the Home Department if he had had his attention called to the treatment of Thomas Bertram, who was sentenced at Sunderland, on the 14th of June, to fourteen days' imprisonment for the non-vaccination of his child; "who was sent to Durham Gaol handcuffed with ordinary criminals, and while there his daily diet consisted of two pints of gruel and 1lb. of bread; that he was denied the use of a mattress on which to sleep, and that his cell door was kept continually locked with the exception of three-quarters of an hour twice a day while out for exercise;" and if he intended making any alterations in the existing prison regulations.

Mr. CROSS said the matter did not rest with the Home Secretary, and he had hoped it would be put right by the passing of a Summary Jurisdiction Bill this session. It had not been found possible, however, to introduce it, but it would be brought on as early as possible next session. He agreed with the hon. gentleman in regard to the indiscriminate use of handcuffs, and had expressed his opinion very strongly on the matter.

THE MEDICAL ACT AMENDMENT BILL.

In reply to Dr. Playfair and Mr. Mills, Lord G. HAMILTON said: In consequence of the opposition by certain members to this Bill, its chances of becoming law this year daily diminish. My amendments were put upon the notice paper to make clear to the opponents of the Bill the course we intended to take, in the hope that their opposition would be then removed, and until I know the effect of my amendments I am unable to give a definite answer as to the fate of the Bill.

MR. J. H. WORRALL, M.R.C.S. Eng., has been placed on the Commission of the Peace for Lancashire.

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Medical News.

ROYAL COLLEGE OF PHYSICIANS OF LONDON.—The following gentlemen have been admitted Members of the College :—

Allbutt, Thomas Clifford, M.D. Camb., Leeds.
Caton, Richard, M.D. Edin., Liverpool.
Cook, Henry, M.D. St. And., Shaldon, Teignmouth.
Cullingworth, Charles James, Manchester.
Moullin, Jas. Alfred Mansell, M.B. Oxon., Porchester-terrace.
Osler, William, M.D. M'Gill Coll., Savile-row.
Owen, Herbert Isambard, M.B. Camb., Gloster-gardens.
Rose, Caleb, Ipswich.
Valcourt, Jules Edm. Théophile de, M.D. Paris, Cannes, France.

The following gentlemen have been admitted Licentiates of the College :—

Bamber, Charles James, St. Bartholomew's Hospital.
Chapman, Herbert Frederick, Richmond, Surrey.
Clark, Charles Alfred Dagnall, Cross Deep, Twickenham.
Francis, Ernest George, Sutton, Surrey.
Hammond, Thomas, Stanley-place, S.W.
Hunter, Christian Bernard, Grafton-street, W.C.
Jones, Lloyd Middleton Bowen, Gwarmacwydd, Llanfalteg.
Kitching, Walter, Heworth.
Lowdell, Charles George Walton, Wadhurst.
Morgan, Edward Smith, Swansea.
Norman, Alexander Stewart, Southsea.
Pearce, Charles Worth, Commercial-road, E.
Rose, James, Royal Infirmary, Liverpool.
Sheppard, Charles Edward, Addison-gardens South.
Sylvester, George Holden, St. Bartholomew's Hospital.
Takaki, Kanehiro, Fentiman-road, S.W.
Walker, Basil Woodd, London Hospital.
Weiss, Hubert Fobeaux, Church-row, Fulham.
Wilson, Edmund Monkhouse, Gilstone-road, S.W.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen, having passed the required examination for the diploma, were duly admitted Members of the College at a meeting of the Court of Examiners on the 25th ult. :—

Dymott, D. Frederick, Southampton.
Elliott, Horace, Westminster Hospital.
Evans, J. William, L.S.A., Trevaughan.
Faulkner, J. Thomas, Urmston.
Harris, F. Alfred, Reigate.
Hine, A. Leonard, L.S.A., Oakley-street, Chelsea.
Hunt, E. Atlee, Montague-street.
Jennings, Edward, Brighton.
Jones, Thomas, New Quay, North Wales.
London, A. Austin, L.S.A., Maidstone.
Mac Dougall, A. Robert, M.B. Edin., Carlisle.
Sweet, W. John, Hebburn-on-Tyne.
Tuke, W. Samuel, Charlotte-street.
Warwick, Percy, Hastings.
Whitney, N. Scott, Great College-street.

The following passed on the 26th ult. :—

Baker, Thomas, L.S.A., Cosham, Hants.
Bryden, R. Joseph, L.S.A., Uffculme, Devon.
Claremont, C. Cecil, Hampstead-road.
Davies, John, Caerswa, Montgomery.
Edington, J. Edward, Southport.
Goyder, C. M'Ivhor, Sunderland.
Herschell, G. Arich, Arundel-gardens.
Homes, James, Ledbury.
Lovell, R. Haynes, St. Mary's Hospital.
Ozanne, F. Newell, Guernsey.
Shann, W. Arthur, Petergate, York.
Stevens, L. William, Swansea.
Tennant, W. Drysdale, Stanford-road.
Tilston, Edward, Goldhawk-road.
Wainwright, R. Spencer, L.S.A., Belmont, Lee.
Williams, L. Edward, Brighton.
Woodman, W. Edwin, Leighton Buzzard.

The following passed on the 29th ult. :—

Beevor, C. Edward, Harley-street.
Burnie, W. Gilchrist, L.S.A., Bradford, Yorkshire.
Davidson, Alexander, M.B. Edin., Ontario, Canada.
Duncan, S. Edward, Madras.
Hart, M. James, Sutton, Surrey.
Hodgson, F. Foster, L.S.A., Chesham.
Moberly, H. J. Robert, Winchester.
Osborn, James, Southwell, Nottinghamshire.
Outhwaite, William, Denmark-hill.
Pardington, G. Lucas, Hereford.
Pearse, Henry, Eastbourne.
Rawson, Ernest, L.S.A., New Zealand.
Rhys, Joshua, L.S.A., Aberdare.
Smith, R. Percy, Belvedere, Kent.
Taylor, S. Johnson, Grantham.
Wells, A. George, L.S.A., Horselydown.
Wood, P. Moore, Corwen, North Wales.

The following passed on the 30th ult. :—

Appleton, T. Alfred, L.S.A., Cathcart-road, Kensington.
Brown, A. Stewart, L.S.A., Leamington.
Bullock, Charles, Congleton, Cheshire.
Cock, M. Fisher, South Molton, Devon.
Collins, G. Duppa, L.S.A., Pembroke-gardens.
Dingley, Allen, L.S.A., Argyle-square.
Fox, B. Bradley, Brislington, Somerset.
Gardiner, B. H. John, L.S.A., Clapham.
Gill, J. Wallis, Clifton, Bristol.
Hearnden, W. Frank, Sutton, Surrey.
Little, Edward, Worcester.
M'Causland, A. Stanley, Gloucester-place.
Margerison, Richard, Bradford, Yorkshire.
Messum, G. B. Willie, Dulwich.
Smale, M. Alfred, L.S.A., Edgware-road.
Symons, G. Francis, Newton Abbot, South Devon.
Wright, H. Claude, L.S.A., Cape of Good Hope.

The following passed on the 31st ult. :—

Bamber, C. James, Moore-park, Fulham.
Boyd, J. S. Newton, St. Heliers, Jersey.
Burton, A. Henry, Sevenoaks.
Bush, Erasmus, Bath.
Dennys, G. W. Patrick, Earley, near Reading.
Floyd, John, L.S.A., Oxford.
Hawkins, W. R. Thomas, L.S.A., Bristol.
Margetson, W. Edward, Dewsbury.
Shann, H. Charles, York.
Stewart, I. M'Dougall, L.S.A., Cambridge-gardens.

UNIVERSITY OF LONDON.—The following is a list of the candidates who have passed the recent Preliminary Scientific (M.B.) Examination :—

FIRST DIVISION.

Back, Herbert Hatfield, St. Bartholomew's Hospital.
Bailey, Charles Frederic, St. Bartholomew's Hospital.
Beevor, Hugh Reeve, King's College.
Berry, James, St. Bartholomew's Hospital.
*Bourne, Alfred Gibbs, University College.
Brogden, Richard William, Guy's Hospital.
Brown, James Grierson, Liverpool School of Medicine.
Champ, John Howard, Guy's Hospital.
Collier, Joseph, University and Owens Colleges.
Cooper, George Frederick, St. Thomas's Hospital.
Croft, Edward Octavius, University College.
Dashwood, Edmund Samuel, Guy's Hospital.
Dillon, John Patrick Crouly, St. Thomas's Hospital,
Dingley, Edward Alfred, University College.
Ellison, John Clement, St. Bartholomew's Hospital.
Evans, Charles Silvester, St. Thomas's Hospital.
*Fletcher, Joseph James, B.A. Syd., University College and Royal School of Mines.
Forrest, James Rocheid, University College.
Frankland, Percy Faraday, Roy. Sch. of Mines and Univ. Coll.
*Halliburton, William Dobinson, University College.
Hart, William Hamilton, Guy's Hospital.
Hichens, James Harvey, Epsom College.
*Hoffmeister, George Bernard, Caius Coll. and St. Barth. Hosp.
Knight, Frederick, University College.
Lever, Frederic, Guy's Hospital.
Mayo, John, London Hospital.
Moore, Herbert Cecil, University of Edinburgh.
Onions, Edwin James, B.A., private study.
*Overend, Walker, Royal School of Mines and St. Barth. Hosp.
Penrose, Francis George, University College.
Pike, Charles James, University College.
Porter, Guy David, King's College.
Price, John Alfred Parry, Guy's Hospital.
*Ridsdale, James Grundy, Queen's College, Birmingham.
*Robbs, Charles Edward, Epsom College.
Roberts, Edward, Guy's Hospital and Epsom College.
Rogers, James Macdonald, Middlesex Hospital.
*Samways, Daniel West, St. Bartholomew's Hospital.
Scott, Bernard Charles, Middlesex Hospital.
Starling, William Egerton, Guy's Hospital.
Stedman, Charles Randolph, Guy's Hospital.
Sutton, Alfred Martin, Guy's Hospital.
Tunzelmann, Edward Waldemar von, University College.
Weldon, Walter Frank Raphael, St. John's College, Cambridge.
Wells, Alfred Ernest, St. Thomas's Hospital.
Wilkinson, W. Camac, B.A. Syd., private study and Univ. Coll.
Woollett, Charles Jerome, Charing-cross Hospital.
Worthington, Sidney, University College.

SECOND DIVISION.

Batten, Rayner Derry, St. Bartholomew's Hospital.
Beard, John, Owens College.
Bertram, Benjamin, St. Bartholomew's Hospital.
Beverley, John Metcalfe, Owens College.
Brooks, Walter Tyrrell, King's College.
Bruce, Robert Marston, St. Thomas's Hospital.
Campbell, Harry, St. Bartholomew's Hospital.
Carnelley, Matthew, Owens College and private study.
Carter, Thomas Edward, St. Bartholomew's Hospital.
Clegg, William Wheelwright, Yorkshire College.
Crowther, Jonathan, Owens College.
Cuff, Robert, Guy's Hospital.
Davies, William Thomas Frederick, Guy's Hospital.
De Cordova, Rudolph Ferdinand F., University College.
Dembski, Frederick Emile, private study.
Downes, Howard, University College.
Dreaper, John Broomfield, St. Thomas's Hospital.
*Evans, Willmott Henderson, University College.
Gordon, Edward, Owens College.
Hall, Ben, St. Bartholomew's Hospital.
Herbert, Charles Alfred, Westminster Hospital.
Hewer, Joseph Langton, St. Bartholomew's Hospital.
Hoar, Charles Desamblier, University College.
Hoyland, Stanley Stenton, St. Bartholomew's Hospital.
Irvin, Frederic David, University College.
Jackson, Philip John, Guy's Hospital.
Kealy, John William Gregory, King's College.
King, Arthur, University of Edinburgh.

Langridge, Frank Washington, University College, Bristol, and private tuition.
Little, Ernest Muirhead, St. George's Hospital.
Marsh, Nicholas Percy, St. Bartholomew's Hospital.
Mason, Arthur Henry, University College.
*Maughan, James, Liverpool Royal Infirm. School of Medicine.
Mayo, Frank Herbert, Yorkshire College.
Parkinson, Charles Joseph, Owens College.
Parry-Jones, Maurice, University College.
Smith, Thomas Hanson, Leeds School of Medicine.
Walker, Joseph Eagland, University College.
Walton, Geo. Augustus Turner, St. Bartholomew's Hospital.
Welpton, John, Leeds Medical School and Yorks. College.
Whish, Martin Samuel, University College.
Whitaker, Joseph James, B.A., University College.
Williams, Arthur John, private study.
Wilson, Arthur Henry, Liverpool Roy. Infirm. Sch. of Medicine.
* Passed also in Mathematics of First B.Sc. Exam.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on July 25th:—

Cuerton, Edward, Beam House, Shrewsbury.
Hodgson, Freeth Foster, Chesham, Bucks.
Llewellyn, Walter, Whitechapel-road.
Martin, Theodore, Evesham.
Morgan, Edward Smith, Castle-square, Swansea.
Rhys, Joshua, Aberdare, South Wales.
Wainwright, Robert Spencer, Heigham Hall, Norwich.

The following gentlemen have passed the Primary Professional Examination:—

William Thomas Crew, Guy's Hospital; Edward Carnall, H. T. Abdy B. Fellowes, and Chas. Henry Fowler, St. Bartholomew's Hospital; Edgar Freeman Griffith Morris, University College; Peter Monti, St. Mary's Hospital.

DR. BOOKEY, of Dublin, has been presented with a gold watch on being appointed physician to Steeven's Hospital.

A MEETING of the Poor-law Medical Officers' Association will be held at the Bluecoat School, Bath, on Wednesday next, at 12 o'clock precisely.

MR. EVORY CARMICHAEL, L.R.C.S., and his wife and family, with one exception, have been lost in the wreck of the iron ship *Loch Ard*.

THE deaths from zymotic diseases last week in Dublin amounted to 44, being 15 over the average number for the corresponding week of the past ten years.

THE Militia Infirmary at Norwood, Yorkshire, has been converted into a General Infirmary, with six beds.

NEAR Tuam last week two deaths took place from lightning, and a woman's leg was fractured during a severe thunderstorm which occurred in that locality.

DR. VANS CLARKE has been transferred from the charge of Pentonville to that of Millbank Convict Prison. The officers of the former establishment, to which Dr. Clarke was attached as medical officer for eight years, presented him, on his removal, with an elegant and substantial testimonial.

LAST WEEK 1792 deaths were registered in London. These included 11 from small-pox, 21 from measles, 27 from scarlet fever, 7 from diphtheria, 101 from whooping-cough, 21 from different forms of fever, and 434 from diarrhœa; these seven principal zymotic diseases thus accounting for 622 deaths of the total mortality. Six fatal cases of sunstroke were registered during the week.

A CENTENARIAN.—A man named Simonton died on the 26th ult., at Ramult, Fermanagh, at the extraordinary age of 114 years. The deceased married when 39 years old, his eldest son being now in his 75th year. He was a strictly temperate man, did not smoke, and was in very fair health until a few hours before his death.

GEORGE RYALL, M.B., T.C.D., recently died at Hamilton, Canada, at an advanced age. Born in Tipperary in 1797, he entered college at an early age, and distinguished himself, obtaining, among other honours, an exhibition of £50 for five years. He studied medicine in Edinburgh for two years, completing his studies at Trinity College, Dublin, where he obtained his degree of Bachelor of Medicine in 1825. He practised in his native town for some years, and then emigrated to Canada, being much esteemed and respected by the inhabitants of the town in which he resided.

DONATIONS ETC. TO MEDICAL CHARITIES.—The corporation of the City of London have given an additional £210 to the Royal Free Hospital. Lady Harriet Bentinck has given £200 to the Hospital for Sick Children, Great Ormond-street. Miss Da Costa has given an additional £500 to the St. Mary's Hospital. David MacClement, of Down, has left £150 to the Belfast Royal Hospital. "An Irish Widow" has given £100 to the building fund of the Adelaide Hospital, Dublin. The Charing-cross Hospital has received £1000 under the will of Mr. W. C. Hewitson.

SMALL-POX IN DUBLIN.—Eighteen deaths took place last week from small-pox, being five over the preceding week. The new cases admitted into hospital for the past three weeks also show an increase, being respectively fifteen, sixty-four, and seventy-two. The Public Health Committee of the corporation have recently applied to the Local Government Board to have an order issued under the Diseases Prevention Act, in consequence of the spread of small-pox, the committee being compelled, by want of funds, to discontinue the payments formerly made for the destruction of the clothes of small-pox patients, but the board have refused the application. The Public Health Committee, with the funds at their disposal, have not done much in the way of sanitary improvements, and, perhaps, as a local newspaper remarks, with more limited means they may not be more successful.

Medical Appointments.

ATKINSON, A. J., M.R.C.P.Ed. & L.M., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer to the Workhouse, and to the North and Seal Districts of the Farnham Union, vice Clark, deceased.
BAKER, H. M., M.B., C.M., has been appointed Assistant Medical Officer to the Leicester Lunatic Asylum.
BARNES, E. G., M.D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer of Health for the Hartismere Rural Sanitary District, Suffolk, at £80 per annum, vice the District Poor-law Medical Officers, whose appointments have expired.
BRADFORD, P., L.R.C.P.L., M.R.C.S.E., L.S.A.L., has been appointed Resident Medical Officer to the Southport Convalescent Hospital, vice White, resigned.
CROLY, T. H., L.R.C.P.Ed. & L.M., L.R.C.S.Ed., has been appointed Medical Attendant to the Royal Irish Constabulary, and Admiralty Surgeon and Agent, at Achill, co. Mayo, vice Hamilton, resigned.
CUMINE, J. M., L.K.Q.C.P.I. & L.M., L.R.C.S.I., has been appointed Medical Officer for the Osmotherley District of the Northallerton Union, Yorkshire, vice Longford, resigned.
DAVIES, J., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Hoxton New Town District of the Parish of St. Leonard, Shoreditch, vice Griffith, deceased.
DIXON, J. D., M.B., M.R.C.S.E., has been appointed Junior House-Surgeon to the Newcastle-on-Tyne Infirmary, vice Hobson, resigned.
FLANNERY, J. G., L.R.C.S.I., has been appointed Medical Officer, Public Vaccinator, &c., for the Ballycroy Division of the Achill Dispensary District of the Newport Union, co. Mayo, at £100 per annum and fees, vice Croly, appointed to the Achill Division.
FRASER, G. B., M.R.C.S.E., L.S.A.L., has been appointed Resident Medical Officer to St. Mary's Hospital, vice Manders, whose term of office has expired.
FULFORD, W. E., L.R.C.P.Ed., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the No. 1 District of the Bodmin Union, vice Trevan, resigned.
GODARTY, H. A., M.B., L.R.C.S.I., has been appointed a Physician to the Kent and Canterbury Hospital.
HORNE, J. F., F.R.C.S.Ed., L.F.P.S.G., L.S.A.L., has been appointed Medical Officer for the Barnsley Union Workhouse, vice Stewart, resigned.
JOHNSTONE, J. J. S., M.D., C.M., L.R.C.S.Ed., has been appointed Assistant-Surgeon to the Gloucester General Infirmary, vice Cole, appointed a Surgeon.
LA FARGUE, G. F. H., M.D., M.R.C.S.E., has been appointed Medical Officer to the Hascombe Lodge, Modern Order of Foresters, Guildford Unity.
LAUDER, W., M.B., L.R.C.S.Ed., has been appointed House-Surgeon to the Chorlton-on-Medlock Dispensary, at £120 per annum, house, &c., vice Bradford, resigned.
LYLE, T., M.D., C.M., has been appointed Assistant Medical Officer to the Birmingham Lunatic Asylum, at £100 per annum, board, apartments, &c., vice Whitcombe, appointed Medical Superintendent of the East Riding of Yorkshire Lunatic Asylum.
MACDOWELL, F. V., L.R.C.S.I. & L.M., L.A.H.D., has been appointed Medical Attendant to the Royal Irish Constabulary, Baltinglass, co. Wicklow, vice Rawson, deceased.
MACPHERSON, C., M.B., L.R.C.S.Ed., has been appointed Medical Officer and Public Vaccinator for the Parish of Kincardine, Rossshire, vice Allan, whose appointment has expired.
PRATT, W., M.R.C.S.E., has been appointed Medical Officer for the No. 4 District of the Depwade Union, Norfolk.
STOKES, R. L., M.R.C.S.E., has been appointed Medical Officer for the No. 3 District of the Chailey Union, Sussex, vice Leslie, resigned.
TURNER, A. M. S., M.R.C.S.E., L.S.A.L., has been appointed a Surgeon to the Gloucester General Infirmary, vice Graves, resigned.
YOUNG, T. F., L.K.Q.C.P.I. & L.M., M.R.C.S.E., L.A.H.D., has been appointed Certifying Factory Surgeon for Bootle, vice McNicol, resigned.

Births, Marriages, and Deaths.

BIRTHS.

CLAY.—On the 25th ult., at Windsor Villas, Plymouth, the wife of Robert Hogarth Clay, M.D., of a daughter.

DOBSON.—On the 28th ult., at Beeston-hill, Leeds, the wife of William Dobson, M.R.C.S.E., of a son.

WYBRANTS.—On the 22nd ult., at Wincanton, the wife of Robert B. Wybrants, L.K.Q.C.P.I., of a son.

MARRIAGES.

DENNEHY—MOFFAT.—On the 17th ult., at the Roman Catholic Church, Castries, St. Lucia, by the Rev. Alexandre Rondard, Charles Dennehy, Colonial Surgeon, to Florence Isabella, third daughter of the Hon. John Shanks Moffat.

GOULD—HEELAS.—On the 1st inst., at St. Paul's, Wokingham, Alfred Pearce Gould, M.S., to Katharine, second daughter of John Heelas, Esq., of Woodlands, Wokingham.

HIGGINS—HIND.—On the 24th ult., at Sutherland Congregational Church, Walworth, George Hodgson Higgins, L.R.C.P.Ed., to Mary Madeline, daughter of the late Charles Hind, Esq.

ROSS—MACDONALD.—On the 9th ult., at Lewis, Roderick Ross, L.R.C.P.Ed., to Isabella Stewart, daughter of John Macdonald, Esq.

WHITELEY—FORREST.—On the 1st inst., at the Parish Church, Nether-Poppleton, near York, by the Rev. John Williams, Vicar, assisted by the Rev. G. M. L. Rees, John Whiteley, M.R.C.S.E., of Wakefield, to Katharine, second daughter of the late Thomas Forrest, of York.

DEATHS.

BOND.—On the 26th ult., at Stalham, Norfolk, Garrett Bond, M.R.C.S.E., aged 61.

BOUTON.—On the 22nd June, at Sumbulpoor, George C. Bouton, M.R.C.S.E., Surgeon, 2nd Madras Native Infantry, aged 24.

BUDGE.—On the 24th ult., at South Shields, John Tait Budge, L.R.C.P.Ed., aged 38.

CARMICHAEL.—On the 1st June, in the wreck of the *Loch Ard*, twenty-seven miles west of Cape Otway, Victoria, Ivory Carmichael, L.R.C.S.I.

FITZMAURICE.—On the 28th June, at Christchurch, James Fitzmaurice, M.R.C.S.E., aged 67.

HELSDON.—On the 20th ult., at Rotherhithe, Frederick Anthony Helsdon, M.R.C.S.E., aged 37.

LYNN.—On the 27th ult., at Claygate, Surrey, William Bewicke Lynn, F.R.C.S.E., aged 92.

MILLAR.—On the 24th ult., at Penrhos, Carnarvon, Charles Millar, Ext. L.R.C.P.L., aged 68.

PALMER.—On the 27th ult., at High-street, Dublin, Edmund Thomas Palmer, L.R.C.S.Ed.

SCOTT.—On the 10th ult., at Laurencekirk, Kincardineshire, Dr. Alexander Scott, aged 57.

WILKINSON.—On the 28th ult., at Chorlton-upon-Medlock, Matthew Alexander Eason Wilkinson, M.D., aged 64.

[N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages and Deaths.]

BOOKS ETC. RECEIVED.

S. A. Smith: *The Times* Newspaper and the Climate of Rome.
Dr. J. Kidd: The Laws of Therapeutics.
Dr. H. J. Garrigues on Lying-in Institutions.
Dr. F. G. Rafinesque: Etude sur les Invaginations Intestinales Chroniques.
W. J. Russell: Domestic Medicine and Hygiene.
Brain. Part II.
Social Notes. July.
The Gardeners' Chronicle. July.
The Pantile Papers. August.

Notes, Short Comments, and Answers to Correspondents.

THE ANÆMIA OF MINERS.

M. FABRE, of Commentry, has recently published a pamphlet on the frequency of anæmia among miners, who are liable, he believes, to a special form of anæmia, different from the epidemic form which has been described, and which is really a secondary anæmia, the consequence of poisoning. This special anæmia is due chiefly to their subterranean occupation, the variation in the constitution of the air, its vitiation by gases, the damp warmth, the increase in barometric pressure, and the prejudicial effect of the dust in the air. Deprivation of light M. Fabre considers as a cause of pallor, not of globular anæmia. The different classes of workers in mines suffer in different degrees, those occupied in quarrying suffering most, and it is said that those who work at night suffer more than those who work by day. The workers in mines of lead, quicksilver, sulphur, and arsenic suffer more than any others. The author urges as a prophylactic that the work of miners should be varied in position as much as possible, and that they should not enter on their work fasting.

ANALYSIS OF 112 CASES OF DIPHTHERIA.

IN the *New York Medical Journal*, Dr. Van Wagenen lately published some observations on 112 cases of diphtheria treated during the last two years. The writer believes in the "filth" origin of the disease, and gives instances in which this condition was present. In one the well-water was poisoned by manure; in a second the back yard of a house contained a cesspool and privies, from which the contents escaped; in a third the house had no cellar, and there was stagnant water under it; in a fourth the water-pipe had sprung a leak, and the cellar contained dirty water. The greatest number of cases occurred in the month of December, and the smallest in June and July. With regard to the contagiousness of the disease, it is shown that 59 cases followed direct exposure, while 13 were suspected of having been exposed to the poison. The greater number attacked were females—62. There were 74 cases under 10 years of age, 22 between the ages of 10 and 20, 7 between 20 and 30, 5 between 30 and 40, and 3 between 40 and 50. The author divides all the cases into—(1) malignant, (2) mild, and (3) diphtheritic throat. Of the first variety there were 22, of the second 46, and of the third (where there was little constitutional disturbance and small deposit) 33. In 104 cases the deposit commenced in the tonsils or some part of the pharynx, and of this number 33 extended up to the posterior nares, and 14 downward into the larynx. In 4 it began in the nares, and in 4 in the larynx. The maximum duration of the membrane was 21 days, the minimum 2. In all there were "about 17 deaths." In 10 cases there was paralysis of the pharynx, in 7 of the larynx, in 6 of the limbs, in 2 of the heart. The temperature was found to be the highest in the initial stage of the malady, averaging from 102° to 103° F., the highest degree registered being 106·5° F. On the all-important question of treatment, the writer professes very great faith in the inhalation of the vapour of water (120° to 130° F.) for the purpose of promoting suppuration of the membrane, while salicylic and carbolic acids were employed for disinfecting the air-passages. Milk, beef-tea, and milk-punch were given as restoratives, and quinine and iron as tonics.

Dr. Robert Bell's paper shall, if possible, appear next week.

SEWER-GAS AND CERVICAL ABSCESS.

To the Editor of THE LANCET.

SIR,—I have lately had under treatment children from three different families resident in Ealing, each child suffering from abscess in the cervical glands. In one family there were four others, who were, or had been, the subjects of enlarged cervical glands, or of an unhealthy discharge from the nose and ears, and of persistent headache, nausea, and loss of appetite. Dr. Cheadle, who was called down to see these children, was of opinion that they were suffering from the effects of poisoning by foul air, and on investigation the source of this was closely traced to the flooding of the house with sewer-gas, which was poured forth in volumes from a wide opening in the main drain close by. The correctness of this opinion seemed to be borne out by the fact that so soon as any of the ailing children were sent into some other part of the country, they lost all unhealthy symptoms, whilst a relapse occurred on their return home, and this did not happen on one occasion only.

On July 14th I happened to be at the house of these patients, and by chance met with an overpowering stench which was coming up through the grating of a drain, which was by the footway just in front of the garden-gate. (The house is near the top of the hill, and in a position which in every other respect seems most desirable.) Believing that the connexion between this imperfect drainage and the suppurating glands and eczema was more than accidental, I went to look at another house standing by itself, and in which resided a remarkably fine girl, who had been the subject of severe suppuration in the cervical glands. In front of this house a sewer ventilating-pipe, three inches in diameter, had been carried up the trunk of a tree to a good height; there was no perceptible smell in its neighbourhood, but on going a short distance along the road the air was poisoned by sewer-gas of the most putrid character. There was, however, no open drain or ventilator to be seen; but, on instituting a search on the other side of the hedge, an uncovered drain was discovered, ventilating itself freely and fouly. Though the engineers have certainly done something towards carrying off the foul gases which ascend in the drains to the top of the hill, much yet remains to be done.

The third patient with cervical abscess has just left for Canada, and as I did not know in what part of Ealing she had lived I could not trace out any association between her trouble and defective drainage. I apprehend that the use of the word "struma," so often made the scapegoat in an endeavour to account for glandular enlargements, abscesses, and unhealthy discharges, will become considerably restricted as we carefully inquire into the surroundings of our patients.

I am, Sir, yours truly,
EDMUND OWEN.

Seymour-street, Portman-square, July 18th, 1878.

A Subscriber to THE LANCET.—Two or three points strike us in connexion with the painful case to which our correspondent refers. First, it is conceivable that the testimonials were not genuine, or that, if genuine, some time may have elapsed since they were given. Secondly, however genuine, they may have been so falsified by the possessor as to vitiate any engagement entered into on the strength of them.

Mr. J. S. Grubb.—The number of the page on which Mr. Croft's lecture on Plaster-of-Paris Splints for Fracture of the Leg appeared should have been 819, not 917.

A. P. P.—Consult the Medical Directory for the current year. It can be seen at any club or newsroom.

Mr. Alfred Higham should apply to a surgeon.

HEALTH OF IRELAND.

DURING the quarter ended 31st March last there were registered in the 706 registrars' districts in Ireland 35,103 births, or 26·3 in each 1000 of the population; and 28,349 deaths, representing an annual mortality of 21·2 per 1000. The eight principal zymotic diseases caused 2909 deaths, or 9·9 per cent. of the deaths from all causes, being above the average, and chiefly due to measles and its sequelæ, the fatal cases of which were very numerous. Measles caused 805 deaths; fever, 680; diarrhœa, 472; whooping-cough, 441; scarlatina, 178; small-pox, 88; diphtheria, 82; and simple cholera, 3. There were 649 inquests reported during the quarter, this number being equal to 1 in every 44 of the total deaths registered. Returns received from the Local Government Board show a considerable increase in the recipients of poor relief, both in-door and out-door, compared with the numbers in the first quarter of last year; when contrasted with the average for the March quarter of the ten years 1868–77, the returns for last quarter show a decline in the number of workhouse inmates, but a much larger increase in the number of persons on out-door relief.

Medicus cannot with propriety call himself "surgeon" or "physician." He should pass the second examination of the College.

STIMULANTS IN THE TREATMENT OF PNEUMONIA.

To the Editor of THE LANCET.

SIR,—Whilst Dr. Thornley's letter, which appeared in your impression of July 20th, is in the memory of your readers, any case bearing on the subject may be acceptable.

On the 21st of January last I was sent for to see a married lady, aged about fifty-eight years. She had never had any children, and I do not think there was anything in her previous history to record beyond that she had never been a strong woman, and had recently returned exhausted and feverish from nursing a relative through a serious illness. I could not ascertain the precise date on which she first felt ill; but she recollected having had a chill about three or four days before my visit. Her temperature was 103°; pulse 105; respiration 43; her face was flushed and her tongue dry. At this time there was no expectoration, and it was not until I examined her chest that she admitted there was slight pain on the right side in front. There was no crepitation, but considerable dulness was present over the base of the right lung, and the breathing over that part was bronchial.

Jan. 22nd.—Morning: Temperature 103·8°; pulse 109; respiration 42. Evening: Temperature 103·8°; pulse 104; respiration 42.

23rd.—Morning: Temperature 102·8°; pulse 108; respiration 40.—Evening: Temperature 102·5°; pulse 108; respiration 40.

24th.—Morning: Temperature 101·4°; pulse 120; respiration 45.—Evening: Temperature 102°; pulse 120; respiration 50.

25th.—Morning: Temperature 101·5°; pulse 114; respiration 38. The tongue was moist for the first time since I had seen her. She had perspired freely, and there had been some viscid, rusty expectoration. From this date the skin remained moist, and scanty expectoration continued for several days.

26th.—Morning: Temperature 100°; pulse 106; respiration 34.—Evening: Temperature 90°; pulse 95; respiration 30.

27th.—Morning: Temperature 90°; pulse 95; respiration 33.—Evening: Temperature 90°; pulse 110; respiration 33. There was pleuritic pain, which was relieved by turpentine stupes. She continued to improve from this date.

From the commencement the patient was ordered brandy every two hours, and good beef-tea and new milk at short intervals. Very soon there was a little delirium, and the stimulant was increased. It was difficult to estimate the quantity of brandy and wine taken daily, probably from six to eight ounces each. She was anxious to take as little brandy as possible. I therefore prescribed for her a stimulant mixture. She very soon felt (as she described it) getting light-headed and wandering, and of her own accord returned to the brandy, much as she disliked it. The simplest medicines only were employed: an acetate-of-ammonia mixture at first, afterwards a bismuth one for diarrhœa, which was serious at one time in her exhausted state. She had thorough good nursing and the usual topical remedies.

Yours truly,

Redhill, July 22nd, 1878. A. B. WAGHORN, M.D.

A Subscriber.—Among the common, perhaps the commonest, causes of impure breath, which resist ordinary treatment, are decayed teeth, accumulations of tartar around the teeth, with or without retraction and ulceration of the gums; ulcers on the fauces and tonsils or at the posterior nares. The case should be carefully examined for all these.

M.D. Edin.—Only under the advice of an intelligent and well-informed ophthalmologist would it be desirable to accept or reject spectacles. Shortsightedness is often hereditary.

L.S.A. Registered will do well to postpone making his suggestions until the Bill shall have become law.

Dr. A. E. W. Fox.—The paper is marked for insertion, and will appear as early as possible.

A COMPLAINT.

To the Editor of THE LANCET.

SIR,—Some short time ago an advertisement appeared in THE LANCET for a medical superintendent, who was to be a "married" man. I sent in my application, and to my surprise find that an *unmarried* man is elected. I would ask you, Sir, if Committees of Visitors are not morally and legally bound by their advertisement, and, if so, am I not justified in asking for all the expenses I have been put to in this matter? It does appear to me a subject worthy of deep consideration, because if advertisements are issued by a body of county gentlemen, surely we have a right to expect they will be strictly and duly adhered to. What can be done by,

July 22nd, 1878. A "MARRIED CANDIDATE"!

ROYAL COLLEGE OF SURGEONS OF ENGLAND: PROFESSIONAL EXAMINATIONS.

THE following were the questions on Surgical Anatomy and the Principles and Practice of Surgery and the Principles and Practice of Medicine respectively, which were submitted on the 19th and 20th ult. to the 196 candidates now undergoing their pass examinations for the diploma of Member of the College:—

1. Describe the operation of tying the common carotid artery below the omo-hyoid muscle. State how the collateral circulation will be subsequently carried on.
2. Describe the operation for the removal of the head of the humerus. Enumerate in their order the parts divided in that operation. What vessels will probably require a ligature?
3. What is the state of the pulse in the following conditions?—(*a*) Compression of the brain. (*b*) Acute peritonitis. (*c*) Delirium tremens. (*d*) Recurrent hæmorrhage. (*e*) Senile gangrene. Give an explanation of the characters of the pulse in each case.
4. What difficulties and complications may occur in, and follow after, the treatment of organic stricture of the urethra by gradual dilatation? How are they to be treated?
5. Trace the pathological changes which occur in a case of hip-joint disease from its commencement to its termination in spontaneous cure.
6. Describe the different tumours to which the eyelids are liable, and their treatment.
1. What are the morbid conditions that induce hypertrophy of the heart? How is the affection recognised, and what are the indications for treatment
2. Describe an attack of gout; state the pathology of the disease, and give the morbid conditions of internal organs and tissues occurring in gouty subjects.
3. Write a prescription, in full, for an adult affected with pneumonia in the stage of consolidation; and state the medicinal plants of the order Leguminosæ, with the pharmacopœial preparations in which they are employed.

A Disappointed One.—We are sorry for our correspondent's disappointment; but we do not think he is quite free from blame. Why did he, in a matter of so much importance to himself, delay writing till so late a period. Let him remember "Bis factum quod cito factum."

Mr. Archibald Evans should consult a medical practitioner.

HOUSE-SURGEONS AND GENERAL PRACTITIONERS.

To the Editor of THE LANCET.

SIR,—Permit me through your columns to protest against the unprofessional conduct of a house-surgeon of a metropolitan hospital, and in doing so I feel assured that I shall have the support of numberless medical men who have been subjected to the same kind of annoyance. To make clear what I wish to communicate I will give a case which occurred very recently.

A robust man applied to me for treatment for orchitis. His testicle was enlarged and very painful. According to my usual practice, I prescribed a saline aperient, and advised him to apply three leeches &c. He acted accordingly; but in consequence of the leech-bites bleeding rather freely he was taken to a metropolitan hospital. The house-surgeon immediately asked the patient and his friends who had advised the application of leeches. Upon being told a medical man in the neighbourhood, he magnanimously replied, "The very worst thing you could have done."

Now, Sir, I submit that the excessive zeal of this newly-fledged surgeon to exalt self at the expense of his brethren is scarcely orthodox. Such thoughtless, dogmatic conduct is apt to injure the reputation of the practitioner concerned. It seems to me a pity that men engaged in the same noble profession should have so little sympathy with one another, and that there should be a greater tendency to thwart rather than to help a brother in his daily work.

I should not have troubled you with this letter had this been a solitary instance of the overbearing manner of the hospital official mentioned; but finding that other medical men complain of a similar want of courtesy having occurred to them at the various hospitals, I thought it had only to be commented upon in order to be remedied.

I am, Sir, your obedient servant,

July 24th, 1878. GENERAL PRACTITIONER.

*** We insert this letter without agreeing with our correspondent that the conduct which he so justly blames is common among house surgeons.—ED. L.

Mr. Alfred Eccles.—A local sanitary authority is possessed of full power to put down a "nuisance."

G. A.—Our own advertising columns generally furnish information of the description required.

Mr. Alfred Corrie.—We are not aware.

X. Z. should make his questions very plain and very brief, and address them to the Secretary of State for the Home Department, Whitehall, S.W.

DR. CECCARELLI.

To the Editor of THE LANCET.

SIR,—Can any of your readers inform me if Dr. Ceccarelli, the Pope's medical adviser, is the author of any work on Medicine?

Yours truly,

July 29th, 1878. M.R.C.S.E.

W. M. M.—Sympathy may do much to produce the symptoms detailed. Such stories are common enough, but of no serious interest.

Kappa.—Time would have to be given for the Medical Council to consider whether they would recognise the degree in question.

Dr. James Cumming.—Very soon.

Fiat Justitia complains that the following question was set in a recent paper for the 1st M.B. examination at the University of London:—"Describe the general structure and functions of the heart in a fish, a frog, and a bird, and compare the mechanism of the circulation in these animals with that of man." The objection raised is that the question is one of "comparative anatomy," whereas that subject is excluded. Surely this is unreasonable. The structure and function of the heart cannot be understood by any candidate who is unable to answer a question like that recited with precision and care. The notion of being "unprepared" for such a question is too absurd. Our only surprise is that so purely elementary a subject should be made the burden of one in only *four* questions at an examination which affects to be severe. It is the sort of question that used to be addressed to first-year's students five-and-twenty years ago.

One who has been in Spain.—The reply to a signed letter should be signed.

SCHOLARSHIPS.

To the Editor of THE LANCET.

SIR,—In the cause of fairness to students generally, I think I may unhesitatingly ask your indulgence for the insertion of the following in this week's LANCET.

At many of the hospitals scholarships are offered for first and second year's men; but it appears these scholarships are generally taken by men really not of that standing, and it is a general feeling among students that such men holding degrees from other universities or schools should not compete. However, they do so, with the natural result of defeat to those for whom the scholarships were intended. I will mention one only (for want of time) that is to take place next week. A first year's junior scholarship, for which one or more gentlemen with degrees intend competing, one in particular, who is M.A. Dublin and B.Sc. London, and I wish to call attention to this apparent unfairness, as other men cannot possibly compete with one who has studied most of the subjects some considerable period.

I must apologise for the brevity of this appeal; but it is an important one, and affects the majority of students.

Yours obediently,

July, 1878. STUDENT.

*** It lies entirely in the hands of the authorities of the schools in question to lay down such rules as would exclude these cases; if they choose not to do so, the scholarships are obviously wrongly named when called junior, second year, &c.—ED. L.

ERRATUM.—In Mr. Samuel Smith's article, published last week, p. 118, line 23 from bottom of first column, the words "nitrate of" to be omitted.

COMMUNICATIONS not noticed in the current number shall receive attention in our issue of the ensuing week.

COMMUNICATIONS, LETTERS, &c., have been received from — Dr. Pavy, London; Dr. Buzzard; Mr. Lawson Tait; Dr. Goodhart, London; Messrs. Burroughs and Co., London; Dr. Savage; Mr. F. Page, Newcastle; Mr. Leeson, Richmond; Mr. Allen; Dr. Bennett, Liverpool; Mr. Pritchard; Mr. Edwards; Dr. Fergus; Dr. Waugh, King's Lynn; Mr. Rodger; Dr. Swain, Devonport; Messrs. Edge and Co.; Dr. Logie; Mr. Bruce; Dr. Butterfield, Indianopolis; Mr. Clapham, Surbiton; Dr. Gillon, Carmarthen; Mr. Jones, Dwyran; Dr. Thornley, Newry; Dr. Williams; Dr. Norman, Middlesborough; Dr. Hopgood, Sunderland; Dr. Leonard; Mr. Evans; Dr. Gill, Folkestone; Dr. H. Tuke; Mr. Antrobus; Mr. B. Croft; Mr. Rutherford, Newcastle; Mr. Corrie; Mr. Kirby; Mr. Rayner, Warwick; Mr. Ross; Dr. Hughes Bennett; Dr. Thursfield, Shrewsbury; Messrs. Blackwood, Edinburgh; Dr. Sturges; Dr. Maguire, Aberdare; Mr. Ellcote; Dr. Smith, Bristol; Mr. Cutler; Mr. Coleman; Mr. Beswick; Mr. Stable; Mr. Taylor; Mr. Sykes; Dr. Green; Dr. Vans Clarke; Miss Emily Faithful; Dr. Bue, Glasgow; Mr. Fraser; Dr. Mushet, New Brighton; Dr. Snell, Sheffield; M.D. Edin.; L.R.C.P.; G. A.; W. S.; M.D., Ramsgate; Fiat Justitia; Medico; Delta; Medicus, Bedford; Curriculum; X. Y. M.; One who has been in Spain; W. M. M.; F. F., Ashton; Aching Pain; A. P. F.; M.R.C.S.E.; A Subscriber to THE LANCET; Photo; A Disappointed One; L.S.A., 1862; J. D. B., Bristol; X. Z.; The Registrar of the Royal College of Physicians; A Subscriber; G. A.; Alpha; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Cripps; Mr. A. Jones, London; Mr. Terry, Selston; Mr. Hodgken, Oxford; Mr. Meld; Mr. Brogden; Mr. Willams; Mr. Ayres; Mr. Walker; Mr. Kelsal; Mr. Harvest; Mr. Chalmers, Castleton; Mr. Benington; Mr. Gore; Dr. Buchanan; Dr. Blackwell, Wortley; Mr. Elliott; Dr. Swann; Mr. Lloyd; Mr. Arnott; Mr. Morris; Dr. Lister, Haydock Lodge; Mr. Howell; Mr. Earp; Mr. Ledwich; Dr. Satchell; M.D., Moreton-in-Marsh; Doctor, Wakefield; M. F. R., York; J. F., Hastings; H. R. H., Surgeon; B. B., Sheffield; Medicus, Manchester; L. R. C. P., Oldham; B. A. C.; F. M. C.; Epsilon; L. M., York; P. R. N. G.; X., Shrewsbury; Cantab.; F. F., Oldham; P. F.; O. P.; Medicus, Liverpool; J. T. M., Bridgwater; Medicus, Kingscross; Caput; Medicus, Barnstaple; Locum Tenens; Medicus, Southend; E. T. M.; Medicus, Glasgow; Zeta; M.D., Portsmouth; R. R., Barnstaple.

York Herald, Cornish Telegraph, Sunderland Weekly Times, Animal World, Sheffield Independent, Cork Constitution, Edinburgh Courant, Glasgow News, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, AUG. 1ST, 1878.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Wet Bulb	Dry Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
July 26	29·72	W.	59	64	106	75	56	0·27	Fine
,, 27	29·85	N.W.	59	64	104	75	59	0·40	Fine
,, 28	29·94	S.E.	59	64	96	72	58	..	Overcast
,, 29	30·03	W.	59	63	109	75	55	..	Overcast
,, 30	30·14	W.	59	63	104	71	53	..	Fine
,, 31	30·32	N.E.	59	62	91	71	56	..	Cloudy
Aug. 1	30·31	N.E.	55	59	103	72	55	..	Overcast

Medical Diary for the ensuing Week.

Monday, Aug. 5.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 9 A.M. and 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

Tuesday, Aug. 6.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.

Wednesday, Aug. 7.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. MARY'S HOSPITAL.—Operations, 1½ P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.

Thursday, Aug. 8.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Aug. 9.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Aug. 10.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

NOTICE.

In consequence of THE LANCET being frequently detained by the Post Office when posted for places abroad *more than eight days after* publication, subscribers and others are reminded that such copies can be forwarded only as book packets, and *prepaid* as such.

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Agent for the Advertising Department in France—

Mons. DE LOMINIE, 308, Rue Grenelle St. Germain, Paris.